

# THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

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## Educational News and Editorial Comment

### THE FORTIETH YEAR OF THE "SCHOOL REVIEW"

The volume number of a periodical is largely a convenience for reference. It is doubtful, therefore, whether many readers noted that the *School Review* in January shifted into its fortieth volume. The length of its career is emphasized by recalling that the *School Review* has survived all but a few of the educational periodicals established before it. It is an interesting coincidence that the *School Review* began life in 1893, the year in which the famous Report of the Committee of Ten on Secondary School Studies was published.

From the beginning the *School Review* has been what its subtitle, persisting throughout the period, indicates—"A Journal of Secondary Education." An explanation of the reasons for establishing it may be found in an editor's note on the first page of the first issue, a note which reads in part as follows:

If any apology is needed for the establishment of the *School Review* . . . it may perhaps be found in the fact that the cause of secondary education, to which the *Review* is devoted, has within the last few months suffered a severe loss in the disappearance of two of its foremost organs. The *Academy* suspended publication last summer, *School and College* last month. The field which these journals filled, and filled so creditably, now lies vacant, and the *School Review* hopes to occupy it.

The same announcement pledged the *School Review* to address itself "to principals, superintendents, teachers, and all others who take an intelligent interest in the work of the academy and the high school." This audience it still keeps in view, except that the changes of the intervening years have brought the various types of high schools into greater numerical prominence than is implied in the quoted statement.

The first editor of the *School Review* was Jacob Gould Schurman, at the time president of Cornell University, and the journal was first published at that institution. Late in 1893 Charles H. Thurber, then president of Colgate Academy and at present secretary of Ginn and Company, became joint editor with President Schurman, and the periodical was published at Colgate University Press. Some time during 1895 Mr. Thurber took over the entire editorship of the *School Review*. In 1896 he came to the University of Chicago, bringing the journal with him. From that time it has been published at this institution. For three years, beginning in 1903, it was published by the School of Education of the University under the editorship of George H. Locke, now city librarian in Toronto. For most of the next four years the title page indicated sponsorship by the Department of Philosophy and Education. During this period editorial responsibilities were carried by James Hayden Tufts and W. C. Gore. This arrangement gave way in the later months of 1909, when Charles H. Judd became director of the School of Education, to editorial committees or boards drawn from the faculty of the School. Editorial arrangements for the more recent period have been: during 1914-16, an editorial board with R. L. Lyman as managing editor; during 1917-18, a joint editorial committee for the *School Review*, *Elementary School Journal*, and the Supplementary Educational Monographs, with Charles H. Judd as chairman; and during the period from September, 1918, to September, 1930, direction by "The Faculty of the School of Education of the University of Chicago." This quoted designation for the twelve-year period from 1918 to 1930 does not indicate that the responsibilities of editorial direction, not only of the *School Review* but of the *Elementary School Journal* and the Supplementary Educational Monographs as well, were discharged by Charles H. Judd.

Although the emphasis throughout the life of the *School Review* has been on the secondary school, marked shifts have taken place in the nature of the content. For the most part, these shifts are indicative of the changes that have taken place in secondary education and in the type of approach in the solution of educational problems. The early emphasis was on treatments of the history of secondary education, the European secondary school, and problems of admission to college. A few illustrative titles of the non-historical articles of the earlier years are "The *Lycées* of France," "Discipline vs. Dissipation in Secondary Education," "High School Programme without Greek," "Rigid Courses vs. Optional Studies," and "Homer in Secondary Schools." However, some of the early titles, such as "The Library as an Aid to School Work," "Articulation of School and College Work in the Sciences," and "The Social Sciences in High Schools," indicate that certain problems are perennial. Regular readers will not require illustration of titles from more recent volumes.

The extent of change in approach in the solution of problems has been greater than in the subjects treated. The *School Review* was a leader among educational periodicals in emphasizing articles which exemplify the application of objective procedures. Occasional articles of this type appeared before 1910, but they were the exception rather than the rule. The emphasis began in 1910 and was signalized by publication in February of that year of a paper "On Scientific Study of High-School Problems" by the new director of the School of Education.

Among contributors to the issues of the first ten years are many who figure prominently in the history of education. They include Herbert E. Bolton, Elmer E. Brown, Charles de Garmo, John Dewey, Arthur T. Hadley, G. Stanley Hall, Paul H. Hanus, William Rainey Harper, R. H. Jesse, David Starr Jordan, S. S. Laurie, A. F. Nightingale, M. V. O'Shea, James E. Russell, Julius Sachs, Ralph S. Tarr, Edward L. Thorndike, Charles F. Thwing, George E. Vincent, and Andrew F. West. To have had contributors of this caliber is a rich heritage for any periodical. However, the list of contributors during the more recent period is no less impressive and is, much more than any heritage, a guaranty of the quality of an educational

journal. Selections from the complete list of authors are presented below. This array could be made more imposing by additions of many more contributors of equal standing.

Francis L. Bacon	Oliver K. Garretson
Bancroft Beatley	James M. Glass
Willard W. Beatty	Carter V. Good
Wilbur L. Beauchamp	Thomas W. Gosling
Roy O. Billett	William S. Gray
Franklin Bobbitt	Emit D. Grizzell
Frederick E. Bolton	Walter S. Guiler
Leona F. Bowman	W. W. Haggard
Frederick S. Breed	Howard C. Hill
Retha E. Breeze	Earl Hudelson
Ernst R. Breslich	J. M. Hughes
John M. Brewer	Percival W. Hutson
Thomas H. Briggs	B. Lamar Johnson
Fowler D. Brooks	Franklin W. Johnson
Leo J. Brueckner	Roy Ivan Johnson
Ralph H. Bush	Arthur J. Jones
Lee Byrne	Charles H. Judd
George E. Carrothers	Walter Kaulfers
W. W. Charters	Grayson N. Kefauver
J. A. Clement	Thomas J. Kirby
E. C. Cline	Harlan C. Koch
Robert D. Cole	Grace T. Lewis
William A. Cook	Edwin S. Lide
George S. Counts	Arthur K. Loomis
C. C. Crawford	R. L. Lyman
Francis D. Curtis	Harry C. McKown
Calvin O. Davis	Ernest O. Melby
Jesse B. Davis	Edward A. Miller
Thomas M. Deam	Walter S. Monroe
Harl R. Douglass	Henry C. Morrison
Elliot R. Downing	Margaret Alltucker Norton
August Dvorak	F. P. O'Brien
James B. Edmonson	Charles W. Odell
Newton Edwards	L. A. Pechstein
Walter C. Eells	B. F. Pittenger
D. H. Eikenberry	J. Orin Powers
Forest C. Ensign	S. Ralph Powers
Emery N. Ferriss	William M. Proctor
Ross L. Finney	Paul T. Rankin
Frank N. Freeman	W. C. Reavis



Joseph Roemer  
G. M. Ruch  
Earle Rugg  
Harold Rugg  
Douglas E. Scates  
Edith E. Shepherd  
Elsie M. Smithies  
David Snedden  
Francis T. Spaulding  
Paul C. Stetson  
George D. Stoddard  
Ruth Strang  
Fletcher Harper Swift  
Percival M. Symonds

Paul W. Terry  
Edward L. Thorndike  
R. M. Tryon  
Austin H. Turney  
Willis L. Uhl  
Douglas Waples  
Frederick J. Weersing  
J. Fletcher Wellemeyer  
William A. Wetzel  
Frederick L. Whitney  
Ernest H. Wilkins  
L. A. Williams  
Howard E. Wilson  
George F. Zook

In closing this brief sketch of the history of the *School Review*, presented in celebration of the fortieth anniversary of its establishment, those associated with its publication cannot refrain from some expression of gratification at the favorable attitude of the secondary-school world toward the journal. Several inquiries in print made in recent years by disinterested persons have disclosed this attitude. One of these studies, first reported by James L. La Poe in the *Educational Research Bulletin* and later quoted in full in the *School Review*, found this educational periodical to be the one most read by high-school principals and the one ranked highest by them with respect to usefulness. In the same article this periodical was reported to be one of three periodicals among those compared having the largest number of articles of a research nature. Although the *School Review* emphasizes articles reporting objective studies, this is not done to the exclusion of illuminating descriptions of practices and of informative and clarifying discussions. Nevertheless, it is reassuring to learn that a periodical which emphasizes reports of studies is highly esteemed by those for whom it is intended. Probably the best assurance of this esteem is a subscription list which has manifested consistent growth over a long period of years.

#### GUIDANCE IN THE CONTINUATION SCHOOL

It is in the nature of continuation classes and schools to emphasize guidance more than do full-time schools. Continuation schools aim to serve the pupil at a crucial time in his life—when he is making the

shift from school to employment. They also serve him for such a small proportion of his time that the training function must be relatively less important than in full-time schools. J. Edward Mayman, of the East Side Continuation School, New York City, writing in a recent issue of *High Points*, goes as far as to say, "Guidance is the continuation school, and the continuation school is guidance." The exposition by Mr. Mayman of the program of guidance carried out in the East Side Continuation School and his statement of the "principles" on which the program is based are quoted at length.

The young worker may enter the continuation school any day in the year. His first contact is not with an overworked, distracted, and disinterested clerk but with a well-trained admission counselor, who treats him, for the time being at least, as the most important person in the world. Formalities are reduced to a minimum. Questions are exchanged. Conversation develops. The assignment to an adviser—not a subject instructor—is made. The adviser is a member of the teaching staff who becomes the educational father of the youngster as long as he remains in school. Jobs may change, courses may be modified, but the adviser is constant and dependable. He is the one person in the school who knows the youngster for what he is. He knows all about him. He visits his home, his shop or office, and his friends.

Immediately upon his assignment to an adviser, the youngster is permitted to leave school for the day, but not before he is given a searching questionnaire to fill in at home with the active assistance of parents and friends.

At the next session, a week later, the young worker reports to the psychological testing bureau. He is made to feel at ease. The meaning and purpose of the continuation school are made clear to him. An atmosphere of friendly co-operation is established. Then follow group intelligence, diagnostic, or aptitude tests.

At the conclusion of the psychological examination, all newcomers make a vocational sight-seeing tour of the major activities of the school. They get a bird's-eye view of about twenty-five trades and occupations, as well as of some of the social and recreational facilities. Critical observations are made. Questions are asked and answered. Presently there is built up in each young mind some sort of a preference for this or that vocation.

The vocational sight-seeing tour begins and ends in the testing bureau. After discussion, amplification, and evaluation of the several activities, comes the most important step of all. This is the personal interview with each youngster. It is an interview characterized by informality, friendliness, and sympathy. The counselor is a good listener. He says only enough to get the youngster to reveal himself. He is guided by what is unsaid as much as by what is said. The interview is concluded with a concurrent recommendation that the student follow that course of study which the available facts in his case suggest.

Note that the recommendation is based upon at least five factors: first, the

questionnaire; second, the psychological test; third, the vocational sight-seeing tour; fourth, the previous school record, and fifth, and most important, the individual interview which culminates in a joint recommendation of a specific course of action.

In such exceptional cases as do not lend themselves to ready decision, recourse is had to additional individual physical and psychological tests. Sometimes this is supplemented by a visit to the home or the job. At other times reference is made to the social-adjustment counselor. Even a provisional recommendation is not made without exhausting all the obtainable facts that might affect the decision.

Let it be noted that in New York City we have two kinds of continuation schools: the general continuation school and the central continuation school. In the main, it is the function of the central continuation school to give extension training in the trade in which the student is employed.

On the other hand, it is the chief concern of the general continuation school to provide a concrete basis for the intelligent choice of an occupation or trade. The school we are observing provides tryout experiences in industrial, commercial, home-making, and academic courses leading to an elementary- or secondary-school diploma.

Now let us return to the recommendation that was made for each boy or girl in the testing bureau. By way of introduction, this recommendation, together with other pertinent data, reaches the adviser before the youngster reports to him at the next session. During the coming counseling period the adviser will re-interview the young worker and will check the significant data on the cumulative record. In all probability, an early visit will be made to the home, to the job, or to some co-operating social agency. In fact, everything is done to launch our young friend auspiciously upon his new adventure.

That is not all. In the usual course of events, the student is encouraged to transfer, under careful guidance, from course to course until his ultimate choice of a vocation is fairly well established. When that point is reached, the aid of the state employment bureau in the school is enlisted, and a suitable job in his chosen field is procured for him. The co-operation of the foreman or employer is sought, first, to confirm the wisdom of the vocational choice and, secondly, to establish definite avenues for further training, promotion, and advancement.

In the meantime, there is a consistent and persistent follow-up all along the line. The health counselor attends to all matters pertaining to physical welfare. The social-service counselor makes the necessary contacts with outside agencies. The co-ordinator marshals all the forces that tend to insure the young worker's progress. In short, there is continuous, complete, comprehensive, and intelligent guidance and follow-up.

If the work thus far bears reasonably fruitful results, our young worker is transferred to the central continuation school, which concentrates its training and guidance program along the definite lines initiated by the general continuation school.

The young worker is on his way to reasonable success. It is a promising take-off. The rest is up to him.

The guidance program of an individual school outlined in this sketchy manner is based upon a few very definite principles of school organization and management.

First, although a very large number of boys and girls are handled daily, all of the work is individualized. At every step of the progress through the school, individual attention is given. Even the allowable minimum of group work in the orientation process is considerably modified in favor of the individual.

Second, there is a complete and progressive tie-up of all activities, both within the school and with the outside world. There is action and interaction. There is freedom of choice and freedom of movement, test and retest, interview and re-interview, transfer and re-transfer.

Third, there is a definite and orderly procedure from step to step, making for clarity and dispatch, yet flexibility is a conspicuous characteristic.

Fourth, while every member of the staff has a definite assignment, there is a considerable overlapping of functions—and properly so. The adviser may know his student well. But often the adviser, himself, needs advice. He gets it by mobilizing all the forces of co-operation and assistance in and out of the school. This is well illustrated in the counseling hour—a new kind of period for the modern school. While one-half of the staff is engaged with the youngsters in the various activities, the other half retires for one hour each day to the counseling room. Each adviser counsels from one to four youngsters during that hour. A unique, though not infrequent, sight in the counseling room is the “guidance huddle.” It consists of the adviser, the instructor, the counselor, sometimes the administrative assistant, or the principal, and last, but by far most important, the youngster himself. The group is engaged in an animated and earnest confab about that unique individual. The young worker is encouraged to take an active part in the discussion. Out of it all come a satisfactory and satisfying decision and a plan of action that fits the youngster and no one else.

Fifth, the fifth and final principle is that the teacher in the continuation school has a real job. He is adviser, instructor, counselor, co-ordinator—all in one. One-third of his school day is spent in out-of-shop or out-of-room activities that have to do in each instance with some particular boy or some particular girl. The adjustments that have to be made are as numerous as the youngsters on the school register. The opportunity for fine, unselfish service is limited only by the vision and capacity of the teacher.

#### EDUCATIONAL TOURS FOR HIGH-SCHOOL SENIORS

The educational tour is a subject which has received practically no attention in educational periodicals, notwithstanding that such tours consume much time and energy in the schools. Almost the only printed discussion extant concerning these tours is the advertising

literature distributed by the business organizations promoting them and deriving profit from them. Under certain circumstances these tours doubtless have their values, but it appears that the negative phases of these projects have not been sufficiently considered. The *School Review* has received from a school administrator who has had experience in the handling of these tours a communication in which he presents the negative side. This communication, from J. M. Clifford, principal of the high school at Romeo, Michigan, is here quoted almost in full.

As principal of a Michigan high school, the writer has received many circulars from railroad and steamship companies extolling the virtues of educational tours. The purpose of these circulars is not to interest the writer in taking a trip but to induce him to interest the pupils in his school, more especially the Seniors, in taking such a trip. In fact, much of the literature sent out is based on the assumption that the Senior class will certainly take some sort of an educational tour. Another part of the writer's mail is made up of letters addressed to the "Washington Club," asking the pupils to consider the advantages of selling certain products to raise money for their educational trip. This circularization of high-school administrators indicates that the idea of educational tours for high-school pupils is common and is fairly well accepted.

The purpose of this communication is to consider the educational value of these trips and the money-raising that they necessitate. Most of the discussion represents "armchair" philosophy and opinion, for no effort has so far been made to measure scientifically the educational gain of such tours. It is hoped that the opinions expressed will stimulate discussion of the problems, so that school authorities sponsoring these activities may come to question the value of continuing the tours and that school administrators contemplating such a trip may think twice before they initiate the project.

The plan of these tours is familiar. In the eastern states, and even as far west as Wisconsin, the mecca of such tours is generally Washington, D.C., or Niagara Falls. In the western states Yellowstone National Park is often the objective. The Seniors as a group earn the money which they spend for the trip to Washington or some other place. The trip is made either during spring vacation or in June. In Michigan high schools the average excursion costs about \$70 a pupil. Of this, about \$50 is earned by group activities and \$20 is contributed by the individual or by his parents. The Senior class raises the money by engaging in a host of enterprises, including dances, carnivals, bake sales, house-to-house vanilla sales, and old-paper collections. At the rate of \$70 a pupil, classes must raise from \$1,000 to more than \$10,000, the amount depending on the size of the class. Any extra-curriculum activity involving the raising of such large sums of money annually with a correspondingly large use of the pupils' time should be carefully considered by school administrators.

Advocates of Senior-class tours stress the educational values of the trips. It is claimed that the pupils learn more history on such trips than they learn in years of school study. If so much historical knowledge is absorbed, how account for the chaperons' frequent reports that, when Seniors are taken to such places as the Congressional Library, the National Museum, or the Smithsonian Institution, faculty guards must be stationed at the doors to keep the pupils from "doing the building" in ten minutes and then rushing down town to a motion-picture theater? On one trip three boys in the writer's group skipped from the party and went for a swim in preference to making the scheduled trip through the Capitol.

Other advocates of tours argue that, in raising the money, pupils acquire much valuable business experience. This factor has been stressed to an extent greater than the actual benefit derived by the pupils justifies. Most of the burden of managing the money-raising activities rests with the faculty members. Furthermore, in every class a few pupil leaders bear the portion of the task not carried by faculty members; the rest of the class merely follow these leaders. Little valuable business experience is gained from collecting old papers or from selling "hot dogs" at a football game.

Most townspeople oppose the project. Local business men are against trips to the national capital, to Niagara Falls, and to Yellowstone National Park because they feel that the many sales activities incidental to the raising of the funds hurt their businesses. Citizens object to the continuous calls that are made for their support. As principal of a school that sent its Seniors to Washington for several years, the writer has heard many householders object to Senior doorbell-ringers who bothered them with frequent requests to buy tickets, magazines, vanilla, pencils, or Christmas cards. Certainly the schools of America cannot afford to turn their communities against them by these demands.

Raising funds for such trips interferes with the regular school curriculum. School administrators try to restrict the work to after-school activity, but time is continually stolen from regular school hours. On the day of a play or carnival school might just as well be closed, for faculty and pupils alike are chiefly concerned with the necessary preparations. Throughout the year the chief interest of the Seniors is in getting money for the tour rather than in succeeding at their studies. On an average, each pupil in the class must work at least 150 hours to obtain credit enough for his share of the expenses. Many pupils work many more than the minimum number of hours. The minimum represents a time expenditure equivalent to twenty-five full six-hour school days. Of course, no one believes that all this time would be spent on studies if no trip were taken, but much of it might well be so used.

In addition to interfering with the regular school curriculum, these tours make almost impossible a well-balanced extra-curriculum program. Athletics, school clubs, the school paper, and musical organizations find that there is little time and no money for them in a school where the Seniors are raising money to go to Washington, Niagara Falls, or Yellowstone National Park.



LATE EVIDENCE OF GROWTH IN JUNIOR HIGH  
SCHOOL REORGANIZATION

A recent issue of the *School Review* quoted from the advance sheets of the *Biennial Survey of Education in the United States, 1928-1930*, the growth in numbers of reorganized schools from 1922 to 1928. The Statistical Division of the United States Office of Education has recently completed tabulation of the reports for 1930, and it is now possible to note the extension of junior high school reorganization from 1928 to 1930. The figures for the two years given in the following table show that the total number of reorganized schools increased by approximately nine hundred during the biennium. This fact means that the rapid increase in reorganization continues. The number of regular high schools reporting to the Office of Education for 1930 was 16,460. More than a fourth of all public high schools reporting to the Office of Education for 1930 were reorganized schools.

NUMBER OF REORGANIZED HIGH SCHOOLS IN  
THE UNITED STATES IN 1928 AND 1930

Type of School	1928	1930
Junior.....	1,566	1,842
Senior.....	632	649
Junior-senior.....	1,486	1,671
Undivided (five-year and six-year)....	1,201	1,615
Total.....	4,885	5,777

SHOULD STUDY HALL AND LIBRARY BE SEPARATE?

One of the issues in the administration of libraries in secondary schools is whether study hall and library should be combined. Of course, there are those who contend that no issue exists here. These would be such persons as are irrevocably committed to one of the two plans at issue, that is, either the arrangement in which the study hall is combined with the library or that in which the library is separate from the study hall. Typically, librarians much prefer separation. Principals are divided on the issue, and among them are many staunch supporters of some arrangement providing opportunities for study in the library.

This divergence of opinion emerges once more in the library project of the National Survey of Secondary Education, directed by B.

Lamar Johnson. This project studied the administration of secondary-school libraries from many angles but included some special investigation of this important problem of the relation of study hall and library. The project did not stop with securing the opinions of principals and librarians concerning the problem but gathered and analyzed information concerning the actual use made of materials in the library by pupils in schools in which the two plans are operative. The evidence was reported by pupils on a simple form inquiring what uses they had made of the library on the day previous to that on which the form was filled out.

The total number of pupils filling out the form was 17,463. Of these, 2,700 were in schools operating the combined study hall and library and 14,763 were in schools with separate libraries. The number of pupils for the latter plan is much larger because many more schools follow it. The reader may feel assured that no selection is represented in the pupils reporting. In the instances in which not all pupils in attendance in a school on a given day filled out the form, the method of sampling was such as to assure representativeness of the pupil body as to sex and classification. All pupils requested to do so filled out the form. Moreover, the reader need have no misgivings concerning the selection of the libraries represented. No school was included which had not previously been reported, by a functionary such as a state supervisor of high schools, state supervisor of school libraries, or other library specialist, to have unusual library service and which had not previously given evidence on an extended and searching inquiry form that unusual library service was being maintained.

The analysis of the replies showed that, in schools in which the library is used as a study hall, 85.7 per cent of the pupils had made some use of the library on the day preceding the filling-out of the form. The corresponding percentage of pupils in schools with separate libraries was 41.4. Both percentages are high when compared with schools with more limited library service, but the percentage in schools combining the study hall with the library is more than double that in the other schools. Results of an analysis of the specific uses made of materials in the library are presented in the accompanying table, which represents an adaptation of evidence in



Mr. Johnson's report. In all the uses listed the percentages in the case of schools combining study halls and libraries are greater than those in the case of schools with separate study halls and libraries.

The evidence encourages the conclusion that, if the aim is to secure maximum use by the pupils of the materials provided, the combined arrangement achieves this aim better than separation. At the

PERCENTAGES OF PUPILS REPORTING DIFFERENT USES  
OF MATERIALS IN THE LIBRARY (1) IN SCHOOLS WITH  
LIBRARY USED AS STUDY HALL AND (2) IN SCHOOLS  
WITH LIBRARY SEPARATE FROM STUDY HALL.

Uses of Library	In Library Used as Study Hall	In Library Sep- arate from Study Hall
Studied definite assignments in—		
Library books.....	25.8	10.6
Magazines.....	4.6	2.6
Newspapers.....	1.5	0.9
Used in working on project or problem con- nected with class work:		
Library books.....	25.4	17.5
Magazines.....	5.3	3.9
Newspapers.....	2.3	1.1
Read for pleasure:		
Library books.....	19.4	7.5
Magazines.....	19.5	9.0
Newspapers.....	17.3	4.5
Used <i>Readers' Guide</i> .....	2.4	1.9
Used card catalogue.....	9.3	4.8
Used newspaper or magazine clippings.....	3.0	0.9
Borrowed:		
Library books in which to study definite assignments.....	9.3	3.7
Library books to use in working on project or problem.....	6.6	2.7
Library books to read for pleasure.....	11.3	4.8

same time, the frequent objection to the combination plan cannot be disregarded. The basis of the objection is implied in the statement by one librarian quoted in the report: "Having the library and study hall combined is better for the pupils but is more difficult for the librarian." Means should be at hand to remove the basis of the objection, for example, teacher assistance for the librarian in supervising pupils. Certainly, the least that the evidence reported can mean to those advocating the plan of a completely separate library is that unusual efforts must be expended to offset the advantage of accessibility of materials in the combination plan.

## PREDICTING SUCCESS AT THE UNIVERSITY OF OREGON

Each succeeding year yields new investigations which bring us rather steadily, even if not rapidly, nearer the clarification of issues in the prediction of success in college. A helpful study of recent publication in this field is *The Relation of High School Preparation and Certain Other Factors to Academic Success at the University of Oregon* (University of Oregon Publication, Education Series, Volume III, Number 1). The monograph is credited to Harl R. Douglass, professor of education at the University of Minnesota, formerly of the institution represented in the investigation.

The students included in the investigation were members of classes entering the University in the autumn quarters of 1926 and 1927. Two groups were studied, namely, members of both classes who completed three successive quarters of work (811 students) and members of the class of 1930 who completed five successive quarters of work (385 students). Both groups were about equally divided as to sex.

The criterion of success is the usual one—college marks, in this instance weighted in proportion to the number of credit hours allotted to the courses. The bases of prediction investigated were (1) the records of high-school credits and marks (in percentage equivalents), (2) percentile ranks in the entering classes on the American Council on Education intelligence test, (3) sizes of high schools from which the students came and teachers' salaries in these schools, and (4) principals' ratings of the students. The measure of the amount of training in each subject-matter field in high school was the number of semester credits recorded. "As a composite measure of both quality and quantity of study in each of these fields a 'subject index' was computed for each student in each field by multiplying the average mark received by the number of semesters spent in the study of the subject." The measure of the size of the high school was the number of teachers on the staff, and for the measure of teachers' salaries the average was computed. Principals' ratings of students were of two kinds. For one of these the principal was "required to rank each student as falling in the first, second, third, or fourth quarter of his class as to his scholastic record and college promise."

For the other he was asked to provide ratings of the students on industry, leadership, and citizenship.

1. College marks may be predicted only roughly by means of any one type of data.

2. The best single type of prognostic data is the average high-school mark.

3. Increased accuracy of prediction is not obtained by considering men and women students separately.

4. Very little may be gained in accuracy of prediction by employing any of the variables included in this investigation other than average high-school mark and a good intelligence test.

5. The probable merit of a combination of these two instruments employed in a properly weighted regression equation is without question greater than that indicated by the multiple coefficient .63. When allowances for artificial homogeneity, lack of reliability in college marks, and other factors operating similarly are made, coefficients from .75 to .80 may be expected between these two variables and "true" college marks.

6. Judged by the degree to which individuals who will not achieve satisfactory scholastic records may be distinguished from those who will, the American Council on Education psychological examination is slightly superior to the average high-school mark.

7. There is no significant correlation between the number of units of credit earned in high school in any subject-matter field and scholastic success in college. The scholastic success of those students whose patterns of high-school credits is deficient in amount in any one of the various fields is to no significant degree inferior to that of the students presenting the prescribed credits.

8. Ratings by the high-school principal on ability to do college work, industry, leadership, and citizenship are materially and positively correlated with scholastic success in college especially in the case of the first of these ( $r = .48$ ). They do not, however, make possible more accurate prediction than is possible without their use in case the psychological-test score and average high-school mark are known.

9. There is but slight relationship between size of high school from which pupils graduate and their subsequent college marks, though the graduates of the smallest schools achieve slightly inferior degrees of academic success.

10. There is apparently no significant relationship between the salaries paid members of the teaching staff in the high school from which a student graduates and his college success. The fact that the median college mark of students graduating from schools in which the lowest salaries are paid is slightly less than that of schools of higher salary categories probably means nothing more than that classifying by salaries paid is just another means of classifying schools by size.

## THE LEARNING UNIT

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Morrison defines the learning unit as "a comprehensive and significant aspect of the environment, of an organized science, of an art, or of conduct, which being learned results in an adaptation in personality,"<sup>1</sup> and he devotes most of Part III of his book to outlining and discussing the units into which the various school subjects may be divided.

When Morrison enumerated the environment, science, an art, and conduct, he related the learning unit to the objectives of teaching. There are units in the fields of knowledge, of appreciation, and of motor control. Learning to typewrite, to speak French, and to manage a lathe are units in the field of motor control; to learn and to enjoy "America the Beautiful" and to get the aesthetic and social significance of *The Idylls of the King* are units in the field of appreciation; to know the cereal grains and their uses and to understand the theory of evolution are units in the field of knowledge. A "unit" is any division of subject matter, large or small, that when mastered gives one an insight into, an appreciation of, or a mastery over, some aspect of life.

The person who tries to make something mysterious out of teaching or learning units is on the wrong track. There is nothing esoteric about them, and no one has had the central idea copyrighted. We have been dividing subject matter into units ever since schools began in ancient times, and we shall continue to do so as long as schools last. For this division there is an inherent necessity because subject matter cannot be assimilated all at once; we must divide it in order to conquer it.

Into what subdivisions a person will divide any particular school subject depends on the objective or objectives he is setting out to

<sup>1</sup> Henry C. Morrison, *The Practice of Teaching in the Secondary School*, pp. 24-25. Chicago: University of Chicago Press, 1931 (revised).

achieve. If he thinks of geometry primarily as a means of mental discipline, he will do one thing; if he thinks of it as a means of developing certain insights into our environment, he will do another thing. History contains a well-nigh endless array of facts and events which may be used for a variety of different purposes. From the standpoint of the eruditional conception of education, these facts could be grouped in such a way as to facilitate their memorization, and writers might conceivably vie with one another in the memory appeal of their groups. Any of the groups made might be called units, but they would not be the units that are suited for the achievement of our present purposes of education. The units, as such, do not determine or define the purposes of education; these purposes determine and define the units. From any standpoint, therefore, we could speak of "acceptable" or "unacceptable" units, "good" or "poor" units, but there is no one type of division that is deserving of being called the "orthodox" unit.

Morrison applies the term "unit" to the relatively large (comprehensive) subdivisions that correspond either to our traditional parts or to our traditional chapters, and he uses the term "element" to apply to a subdivision of this larger unit. These elements are functional aspects in the understanding of the larger unit. The aspects must themselves be understood in relation to the larger problem and to one another in order that the understanding of the whole may emerge. To the extent that they bring together and unify smaller elements—that is, are comprehensive—they are also logically entitled to the term "units." In other words, a unit is not measured by its size; it is not something arbitrary. It is measured by its content and function, by its unifying and interpretive effect. This fact makes the term relative, much as the term "species" is relative in logic. A "species" is merely a subdivision of a larger group known as a "genus," but what is a species in one series may be a genus in the next. Similarly, what is a unit from one standpoint may be an element in a larger unit from another standpoint.

Morrison gives a good example of this relationship on page 233 in the 1931 edition of his book. Gender, number, person, case, and tense may be taken up as units in grammar, but they are not adequately understood unless they are viewed also as elements in the

larger unit of "agreement." This unit is "comprehensive" in the sense that it embraces all the others and relates them under one principle. The resulting understanding works in both directions. It interprets more fully the meaning of each element, and it enriches the idea of agreement.

The units that Morrison presents in his book harmonize very well with what we are now aiming to achieve in education. They are not, however, the final word on the subject, and Morrison would be the last to make such a claim. We shall be experimenting with unit divisions as long as teaching lasts, for there is involved not only the progress in knowledge and educational conceptions but also a large element of personal taste. A series of units that may be suited to the needs and personality of one teacher may not be suited to those of another. What we must by all means avoid recognizing is a series of approved units. Such a series would put teaching into a strait-jacket. The procedure of having committees determine the units in any subject for the teachers of a city, a county, or a state is of doubtful expediency. To use such units as suggestions would not be objectionable, but to expect teachers to follow them as official pronouncements would be highly objectionable.

Morrison's reference to both environment and organized science in his definition has no direct bearing on the unit itself, but it does have reference to a significant aspect of curriculum construction and arrangement. In all content subjects there appear to be, from the standpoint of learning procedure, three successive cycles of subject matter: first, the elementary cycle, the function of which is to give experiential contacts with the field; next, the secondary cycle, the function of which is to give a concrete, connected, and interpretive grasp of the data in the field; and, third, the collegiate cycle, the function of which is scientific mastery and the ferreting-out of relationships.

Biology, for example, would be represented in the first cycle by nature-study, in which the children would become acquainted in a direct and friendly manner with the plants and animals in their environment. In the second cycle would appear botany or zoölogy, attacked from the standpoint of natural history. The experiential basis started in the first cycle would be extended, the data would be

interpreted with special reference to human needs and culture, and they would be grouped or systematized. The pupil coming out of this cycle would feel acquainted with the plant or animal life of his environment, and he would be ready, if he desired, to proceed into the third cycle and take up such subjects as monocots, dicots, physiology, morphology, and ecology.

In history the function of the elementary cycle is to develop vivid and meaningful pictures of life in former times. The home life, the heroes, and the great happenings form the subject matter, and activities plus interesting reading form the method. The function of the secondary cycle is to develop a connected and interpretive view of social evolution. This is the cycle that is now much in the limelight. The third cycle leads students into special historical studies, such as Greek history, medieval history, and English history. Beyond the third cycle may always be found the graduate cycle for research purposes.

Morrison distinguishes between the adaptation that is the outcome of the unit when mastered and the assimilative material that is used for developing the adaptation. One is the end, and the other is the means for attaining the end. This distinction is fundamental and needs to be clearly grasped by the teacher in the classroom; not to observe it is to confuse matters in the mind of the learner. In the development of an understanding of the condensation of moisture from the air, the data used—the “sweating” of a water pitcher, the moisture on the windowpane, the breath on a cold day, etc.—are the assimilative material, and the understanding of the cause of condensation is the adaptation. Usually little difficulty is encountered in distinguishing the assimilative material from the adaptation in the natural sciences, but it is not always easy in the humanistic subjects, where instances of assimilative material often look like important items in themselves. Is the French Revolution, discussed by Morrison, a unit in general history, or is it merely an item of assimilative material in a larger unit? When an understanding of the transition from medieval autocracy to modern democracy is to be gained, the French Revolution is only an item of assimilative material, along with the revolutions in England, Italy, Russia, Germany, and Spain, extending from the seventeenth century to the present. It is diffi-



cult to see how a war can ever be anything but assimilative material in any course of cultural history, and even then only the causes leading up to the war and the results coming out of the war are concerned. There may be reasons for following the details of a war, but gaining an understanding of the course of social evolution is not one of them. In a war college not only a war as a whole but even single battles may be significant units in military strategy, but such study is an aspect of professional education.

To distinguish between the gist of a unit and the assimilative material, the teacher needs only to have clearly in mind the objective that he is trying to achieve and the means that he is going to use in achieving it. If the objective and means fail to bring in certain items of knowledge that he thinks the pupils ought to know, he should leave such items serenely alone. If the pupils really ought to have the information, the items must be significantly related to some other unit which may be depended on to gather them in, or they may be left for general reading. To drag them in by the heels anywhere is to clutter things up and confuse the issue. To omit them sometimes takes courage, especially in relation to the textbook that may be in the hands of the pupils; but, if the teacher knows what he is about, he should stick to his convictions and go ahead. Mere lesson-learning is not education.

Learning units have been made so much of in certain quarters that teachers have gained the impression that our textbooks are inherently and necessarily out of harmony with the proper arrangement of subject matter and that the only way for the master teacher to proceed is to use an outline or syllabus (prepared, perhaps, by an orthodox unitarian) and to use a large variety of books and articles as reference material. There is nothing wrong in proceeding in this manner, but what is to be done after this teacher has written up his material and procedures in the form of a textbook, as some of them have? Textbooks are not inherently out of harmony with wholesome educational conceptions, when properly used, and to follow a textbook is not necessarily evidence of educational incapacity. The beginning teacher can seldom do better than to follow a textbook, especially if he has had some part in choosing it. Many textbooks are written by persons who have an educational contribution to



make and who are well equipped to incorporate this contribution in a well-rounded book. As the teacher gains in experience, in knowledge, and in professional insight, he may well become superior to any textbook and center his work on an outline or syllabus, but even then this procedure is not necessary. He may still feel that he can get the best results by using a published book as the backbone of his course. Another teacher, no more competent nor efficient, might feel differently. For him to follow a textbook might have a deadening influence which would be entirely absent when he followed a syllabus of his own construction. To follow his own syllabus might give his personality just the freedom and freshness that it needed, and, if it would vivify the teacher's conceptions, it would through him vivify also those of his pupils.

## SUMMARY OF INVESTIGATIONS OF EXTRA-CURRICULUM ACTIVITIES IN 1930. II

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This article is the second of two articles concerned with the literature bearing on extra-curriculum activities published in 1930. The first article gave an annotated bibliography of ninety-one studies and a list of fifteen books. In the following pages a brief summary will be given of most of the studies in which the treatment is of a quantitative nature and of a number of the studies that offer critical analyses. Some overlapping in the classification of the references is unavoidable. The limitations of space have prohibited the giving of attention to the techniques of investigation except in cases in which the method of attack was a significant contribution. It is interesting to note that the number of articles and books published in this field in 1930 was approximately twice the number published in 1929.

### TECHNIQUES OF EVALUATION

A considerable amount of attention was paid during 1930 to the problem of evaluating the results of participation in extra-curriculum activities. Cutright and Shoemaker (14)<sup>1</sup> present data that emphasize the unreliability of teachers' letter marks for general social traits, such as initiative, honesty, and reliability. In the school from which their data are taken systematic efforts had been made to secure reliable ratings on citizenship with the aid of definite descriptions of the traits in question. The data concerning the validity of these ratings were obtained by administering to fifth- and sixth-grade pupils two tests of honesty developed by Hartshorne and May, one of which was concerned with geography. The answers of 194 pupils were recorded on rice paper, and the original papers were

<sup>1</sup> The numbers in parentheses refer to the numbered bibliography in Paul W. Terry, "Summary of Investigations of Extra-Curriculum Activities in 1930. I," *School Review*, XL (February, 1932), 124-37.

returned immediately to be scored by the pupils themselves with the aid of a key. A considerable number of pupils changed their answers. Pupils who had been given a mark of A by their teachers in honesty made as many changes as those who had been given the lower marks of B and C. The authors conclude that the discrepancy is probably explained by the practice of treating a trait like honesty as if it were a general entity instead of a complex of specific behaviors.

Baxter (2) shows how records of the group discussions of twenty-two fifth-grade pupils revealed progress, at least on the part of some pupils, in the development of an attitude of group responsibility for the happiness of individual members. Several pupils had complained that a new girl from Texas had been teased by four boys; the group ordered that the names of the boys be read at each meeting until the teasing stopped. Details of the discussion of the problem at different meetings are given in the records, and these exhibit a change of attitude on the part of the boys, greater self-control by the girl, and the satisfaction of the group over the developments.

Objective or standardized tests are not the best means of measuring the traits of school citizenship, according to Tillinghast (89), because in the available tests disingenuous pupils can secure unwarranted scores—on the trait of sincerity, for example—and because tests of moral qualities ought to be pragmatic; that is, they ought to be concerned with the usual relations of boys and girls at school, at home, or wherever they may be. Tillinghast asserts that teachers can make useful evaluative judgments by watching for signs of such traits as co-operation and friendliness in the relations between teachers and pupils and signs of self-control on the part of the student body in emergencies. Subjective but critical observations of this kind are being used and doubtless will be used until objective techniques are made available for greater areas of the field than they now cover.

In a critical article on evaluation Cox (13) makes several points to which careful consideration should be given. Giving credit toward graduation, specific mention of achievement on diplomas and on permanent record cards, and space for similar records on college-admission blanks represent significant evaluations. "If the activity

in question does reproduce typical desirable situations of general social living, if pupils do engage in it purposefully and wholeheartedly, and if it does affect human relationships wholesomely, then it is justified in and of itself" (13: 266). He considers it "futile to judge of the beneficial or deleterious effects of football or debating on pupils by scrutinizing the grades they make in Latin or mathematics" (p. 266) since the subjects of study are merely means, not the ends, of education. In conclusion he says that *adequate* evaluation must await a more general recognition on the part of the school of the fact that education is "a life-process."

#### TECHNIQUES FOR THE IMPROVEMENT OF SUPERVISION

Several articles describe devices or techniques which may be used by sponsors to improve the supervision of pupil activities. Brown (8) describes a five-point pupil self-rating scale of one hundred questions, equally distributed under ten traits, such as fair play and self-control. A sample of the questions is: "Do I abide by an official's decisions without question, either by word or deed?" A second scale of this type dealing with co-operation is described by Kregel (44). Numerical values ranging from zero to five (omitting two) are attached to the five column headings, "Never," "Seldom," "Sometimes," "Often," and "Always." Such statements as the following are to be checked: "I avoid bossing when I differ with my classmates." Scales of this nature can be made by any sponsor to deal with any traits which he wishes to develop in such organizations as home rooms, honor societies, and clubs. McKown (53) presents a scale for the rating of assembly programs either by a competent committee or by the entire audience. The scale includes twenty-three items representing the objectives and values of assembly work which the author drew from an exhaustive search of the literature. For example, under "Presentation," which is one of the three main headings, three of the six items are "Characterization," "Originality," and "Stage Effects." The ratings of each item range from one to five points. Southard (84) reports a point system to stimulate the work of a dramatic club. Various numbers of points are given for acting, coaching, lighting, scene work, costume-making, etc. Six points admit a candidate to membership, and sixteen points entitle a member to a gold pin.

The business aspects of the extra-curriculum activities of a junior high school were greatly improved, LaVigne (45) reports, by the selection of such projects as organizing "the student body for the sale of tickets to the operetta" (p. 362) for the enrichment of a course in elementary business training. The home-work assignment for this project gave directions for drawing an organization chart and named the difficulties to be overcome. In class the following day the organization actually to be used was charted. Sifert (80) describes a technique by which the principal of a high school can discover what social abilities tend to be characteristic of the pupils who enter his institution from each of the several contributing elementary schools. His data are concerned with the trait of leadership. After finding the percentage of the high-school pupils coming from each elementary school, he calculated the percentage of the total number of home-room officers who came from each school. He then divided the latter figure by the former and obtained a "leadership quotient" for each school. School C, which furnished only 6.5 per cent of the pupils, furnished 13.9 per cent of the officers. Its "leadership quotient," accordingly, was 213, which entitled it to the first rank among eight schools.

#### EXTENT OF PARTICIPATION

Three studies bear on the extent of participation in extra-curriculum activities. After a comprehensive investigation of the participation of 1,080 women students in thirty-seven types of organizations in fifteen teachers' colleges, Moffett (61) reports that less than one-third are or have been members of any kind of organization, with the exception of religious, literary, and musical organizations. More than 50 per cent of the members are passive in their activity; as an average, less than 10 per cent of the members of an organization ever hold office, and less than 30 per cent are active participants in committee work, programs, or attendance. Leadership is concentrated among a few students. The indifference of members is shown by a lack of enjoyment on the part of 20 per cent and a general inability to report any particular reason for the preference of an organization other than emotional satisfaction and social contacts. The students appear to get the same satisfactions from or-

ganizations of almost any kind, but they prefer organizations in which the faculty shows the greatest interest.

After studying 2,924 students, or 36 per cent of the enrolment in twenty-eight California junior colleges in 1928, Eells and Brand (17) found that 68 per cent of the Freshmen and 83 per cent of the Sophomores participated in one or more activities; 26.4 per cent of the total number participated in none; 23.7 per cent, in only one activity; 21.8 per cent, in only two; and 14.1 per cent, in from four to seven activities. No comparisons with four-year colleges were available, but the authors conclude that the junior colleges are giving ample opportunities in extra-curriculum activities. Stanton (85) studied twenty-six elementary schools and found that hall duties were delegated to pupils by eighteen principals; basement patrol, by seventeen; stage care, by eleven; lost-and-found agencies, by thirteen; checking books in the library, by eleven. He then asks why principals in larger numbers do not give to their pupils the benefits of social training of similar types.

#### RELATION OF PARTICIPATION TO VARIOUS FACTORS

Eight studies give data on the relation of participation in extra-curriculum activities to various other factors. Bellingrath (4) compared 120 leaders in the Senior year in five cosmopolitan high schools who scored highest on a general-activities point scale with a like number of Seniors scoring zero. The number of boy leaders was larger than the number of girl leaders, but the boy leaders were, on the average, one-half year older, and the girl leaders one-half year younger, than the others of their respective sexes. The leaders were not significantly higher in intelligence, though a few girls tended to be so. The girl leaders were taller and heavier than the other girls. Both boy and girl leaders received higher marks and both rated higher on socio-economic status according to Sims's standards<sup>1</sup> than did the other Seniors. On nearly all the items included in the New York Rating Scale for School Habits, the girl leaders rated higher than other girls, but the boy leaders rated higher than other boys only on ambition to carry on education. In general, it appears

<sup>1</sup> Verner Martin Sims, *The Measurement of Socio-economic Status*. Bloomington, Illinois: Public School Publishing Co., 1928.

that the girls who rose to leadership were more decidedly superior to others of their sex than were the boy leaders.

By the use of correlations secured by the contingency method, Moffett (61) studied the relation of the participation of 1,080 women in fifteen teachers' colleges to several desirable professional characteristics. He found (1) that high rank in personality was characterized by leadership in all types of social activities, (2) that high rank in professional promise was characterized by more frequent participation in the more serious, individualistic activities, (3) that high rank in extra-curriculum activities was characterized by versatility in the kinds of activities participated in, and (4) that high rank in academic average was associated with a varied and extensive participation in such activities as permit the participant rather than the group to control the time of participation.

Hayes (33) analyzed the carefully recorded six-day diaries covering all their waking hours kept by 314 pupils (practically all) in a single high school. Only a few of numerous important findings can be given here. Ninety-six per cent of the pupils were members of organizations, but only 64 per cent recorded time spent with their organizations. The correlation of the number of memberships with the time spent was  $.67 \pm .001$ . There were small relations both between intelligence and the time spent with organizations and between intelligence and the number of groups joined. Sex maturity, nationality (American-born versus Italian or Polish), and occupational status of parents (business and the professions versus trades and labor) were definitely related to participation. Home duties and working for wages limited participation. The low participants spent more time in study, but the high participants made higher marks.

Levi (46) followed 206 leaders in thirteen elementary schools to ten junior high and nine senior high schools in three large cities. She found that the carry-over of leadership from the junior to the senior high school ( $r = .515 \pm .043$ ) was three times as great as that from the elementary school to the senior high school ( $r = .172 \pm .027$ ). The better organized and more extensive program of activities in the junior high school as compared with the program in the elementary school probably accounts for the difference.

After studying 55,550 grade-point averages for eight semesters of



work earned by thousands of students at the University of Wisconsin, Byrns (10) reports that fraternity men and women made higher average marks than non-fraternity men and women and that professional fraternity men and women made higher marks than social fraternity men and women. Bright (6) reports that the correlation, secured by Ayres's simpler form of the Pearson product-moment formula,<sup>1</sup> between teachers' letter marks in citizenship and the academic averages of sixty-six Seniors in high school was 0.64. In the sixth grade the correlation between marks in citizenship and intelligence quotients was about one-half as high as that between intelligence and academic average. Coleman (11) reports a comparison of 125 problem pupils in a high-school student body of 1,400 with a like number of non-problem pupils of the same sex, grade, and intelligence. The "problem" pupils were those who had been kept after school four times in each of two consecutive semesters for unexcused tardiness, truancy, disobedience, or failure to make up back work. The problem pupils occupied few responsible positions, such as offices in student government or membership in honor societies, but they were affiliated more often than were the non-problem pupils with social clubs, athletics, and publications and plays. Anderson (1) found that, of the 48 per cent of the student body of Teachers College, Columbia University, who were regularly employed, those who worked the minimum, average (29 hours), and maximum number of hours a week made approximately the same marks and the same scores on the matriculation examinations.

#### ADMINISTRATIVE PROBLEMS

Two articles are concerned with administrative problems. Plenzke and Doudna (72) investigated 1,263 high-school teachers in Wisconsin who in 1929 were working in their present positions for the first time. Of these teachers 47.6 per cent had had no previous teaching experience. Practically all those investigated were sponsors of pupil activities, and many had been engaged with such sponsorships in view. Plenzke concludes that teacher-training institutions should take more definite steps to prepare their students for this demand. As a means of minimizing the influence of high-school fraternity

<sup>1</sup> Leonard P. Ayres, "A Shorter Method of Computing the Coefficient of Correlation," *Journal of Educational Research*, I (March, 1920), 216-21.



members, Prunty (74) suggests selecting the leaders of pupils' organizations on the basis of the standards of the National Honor Society. This plan is effective, he says, because fraternity members ordinarily do not meet such standards of scholarship and citizenship.

#### ATHLETICS

Several investigations deal with aspects of athletics. Gorrell (26) studied the rise and fall of the enrolment at eight Western Conference universities and eight Ohio colleges between 1905 and 1924 in relation to the success and failure of the football teams. In both groups of institutions attendance exhibited no significant relation to either success or failure in football, the winning of conference championships being included. Hindmarsh (36) gives data concerning more than 500 scholarship men at Harvard College, of whom 12.3 per cent were athletes during the years 1923-28. Scholarships were awarded primarily on evidence of scholastic ability, and the scholarship men who were also athletes made decidedly higher marks and more frequently won honors at graduation than did the average student.

Morley (64) investigated the extent of participation in interscholastic basket ball and football and the practices connected therewith in 547 high schools in the North Central Association of Colleges and Secondary Schools. He reports that nearly all schools engaged in these sports, that about one-fifth of the boys participated in each, and about one-half of the boys participating played in both sports. Sometimes as many as thirty-six basket-ball games were played in a season. Many schools admitted that the school day was shortened to allow time for participation in the games and that local enthusiasts made bets on the games. Jones (40) reports that of 100 large high schools in 27 states 81 per cent provided athletic fields averaging 8.80 acres in size; 33 per cent provided separate outdoor fields for girls averaging 2.45 acres; and 48 per cent had tennis courts, the average number provided being 2.58 for boys and 2.46 for girls. Several significant psychological studies of athletics are described by Griffith (29). For example, four and one-half weeks of practice in making free throws in basket ball netted a reduction in the percentage of errors in direction (either to the right or to the left of the basket) from 32 to 18, while errors in distance (long or short

of the basket) maintained a constant percentage of 40. Errors in distance, obviously, are more difficult of improvement than errors in direction. In the six senior high schools in Rochester, New York, Norton (68) found that 51-91 per cent of the boys were participating in twenty-eight seasonal sports, the percentage depending primarily on the availability of facilities.

#### MISCELLANEOUS PUPIL ORGANIZATIONS

A single type of pupil organization is the subject of investigation in a number of studies. A penetrating, elaborate, and critical analysis of the practices of home rooms in 130 secondary schools in 37 states made with the aid of a check list including 145 items grouped in seven divisions is reported by Kefauver and Scott (41). They found home rooms organized in seven-eighths of the junior high schools but in only 16 per cent of the senior high schools, in one-fifth of the schools enrolling less than 200 pupils but in three-fourths of those with more than 500 pupils. The median number of minutes a week assigned to the home room and the median number of minutes a period were: in the junior high school, 118.5 and 44.5, respectively; in the senior high school, 173.3 and 27.1, respectively. The pupils were usually distributed to the rooms in random or alphabetical order by grades, and ordinarily each teacher worked by himself in preparing programs. Guidance activities were reported more frequently than others.

Klein (43), after a careful analysis of the population of the evening high school, concludes that the adult students of this institution greatly need further training in the values usually associated with extra-curriculum activities. The principles of administration which he mentions as appropriate for the evening high school are the same as those usually advocated for the day school with the exception of the following three: (1) All adults in the community, even though not enrolled in the school, probably should be invited to take an interest. (2) Each organization should handle its own finances. (3) Any federation of organizations should be loosely knit, each serving primarily its own group.

After obtaining questionnaire data from eighty California high schools, Hayden (32) reports that seventy-seven have student coun-

cils, which are usually elected and which number from five to fifteen members. The frequency of meetings varies from daily to monthly. Thirty exercise disciplinary powers, though seldom as formal courts, and four possess only advisory powers. Fifteen mentioned finances and ten mentioned securing the support of the student body as the most difficult problems. A critical psychological analysis of the place of social dancing in the school is given by Marsh (55). Young people should be taught to dance skilfully and beautifully and in such a way as to express the noblest sex philosophy as a part of personality development. The teaching should begin in the fifth or sixth grade before the awkwardness and self-consciousness of adolescence appear and while the neuromuscular system is easily trained. Under thirteen heads a large number of methods of stimulating thrift are given by Michener (57) after studying a list of 150 difficulties encountered in inducing children to deposit in school savings banks. For example, "Attractive examples of thrifty people" and "Showing value of savings account in securing employment" were listed under the heading "Making the habit of thrift as a character asset attractive to the child."

Miller (59) describes the unusual type of graduation exercises conducted five times during the last two and one-half years at the Hannah Penn Junior High School, York, Pennsylvania. The ceremony of promotion is an integral part of a pageant. Each pageant presents dramatically an important educational principle, such as bridging the gap between the junior and senior high schools or the four powers of education: home, church, state, and school. Practically the entire student body participates in this enterprise to interpret modern education to the patrons and to the community. Scott (78) reports that 40 states have debating leagues with a membership of 11,392 high schools. Annually 79,643 debates are held, 99,978 pupils participating before audiences exceeding 4,000,000 people. In Wisconsin the High School Forensic Association has 355 members. In 1930 the loan-package library service of the University of Wisconsin lent 2,332 packages of books and pamphlets to 381 schools. As the debates discuss topics of current civic interest, such as old-age pensions and government ownership of power sites, this activity represents a powerful force in molding public opinion.

## A NEGLECTED FACTOR IN THE TEACHING LOAD

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Factors most commonly recognized in educational literature as determinants of the teaching load are the following: number of daily recitations, size of class, number of pupil recitations, number of different subjects, number of daily preparations, subject combinations, length of day, and length of periods. Many fact-finding studies have shed light on these elements of the teacher's load. One factor—size of class—has been the object of considerable experimental investigation.

It is the purpose of this article to present some facts which will define the teacher's load in one respect which seems to have received inadequate attention. How many different pupils are committed to a teacher for education during any given semester or year? How frequent and adequate for education are the teacher's contacts with his pupils? These are questions not satisfactorily answered by surveys of class size or of pupil-recitation hours. These questions call to the attention a problem of peculiar importance in the junior high school because of the tendency in that school to administer education through many subjects, each of which is taught by a specialist. The pupil is taught by eight to twelve teachers, and many of his classes meet one, two, three, or four times a week, in contrast with the traditional high-school program of subjects each of which is pursued five days a week. It is clear that the teacher who meets classes but once a week makes contact with many more pupils than does the teacher whose classes meet every day in the week. If the loads of two such teachers are highly specialized—the one in art, let us say, and the other in English—and each teaches twenty-five periods a week, it is apparent that the former meets five times as many pupils as the latter. Furthermore, the former has one-fifth as many contacts a week with his pupils as has the latter. To the de-

gree that knowing the individual pupil is essential to educating him, here is a sharp contrast in teaching load.

That this factor in the teacher's load might be illuminated, data were gathered by means of a simple inquiry form submitted to the teachers of the three junior high schools in Johnstown, Pennsylvania. These schools serve pupils in Grades VII-X, inclusive, and have enrollments of 1,200-1,500 each. They administer the program of studies and schedule recommended by the Department of Public Instruction of Pennsylvania. A feature of this schedule which is of special significance here is the provision for carrying all subjects or subject fields through Grades VII, VIII, and IX. The schedule is planned in such a way that the pupils have three or four subjects in which the classes meet five times a week, a number of subjects in which the classes meet once or twice a week, and usually one subject in which the class meets four times a week. The reader who has studied a wide assortment of junior high school programs of studies will recognize that such a schedule is typical of many states. In the Johnstown schools pupils of Grade VII typically have ten teachers, pupils of Grades VIII and IX typically have eight or nine teachers, and pupils of Grade X typically have seven teachers.

The teachers were asked to list all the classes they taught during the first semester of 1930-31, showing for each the subject, grade, number of pupils enrolled, and number of periods a week. On a second page the teachers filled out a frequency table to show the number of pupils they met in class one period a week, the number they met two periods a week, etc. Thus, if a teacher met a particular pupil in history five times a week and in geography four times a week, the teacher indicated that he met the pupil nine periods a week. Similarly, the teacher of Smith-Hughes work indicated that he met each of his pupils fifteen periods a week. The two pages of the blank were checked against each other to test the accuracy of the data. Blanks were filled out by 145 of the 165 teachers in the three schools. All departments were fairly represented.

*Comparison of different measures of teaching load.*—As a measure of teaching load, the number of different pupils in a teacher's classes may well be presented in comparison with a more common measuring instrument, the number of pupil-recitation hours a week.

"Pupil-recitation hour" is a unit for the measurement of area comparable to the square foot. It is the product of the number of pupils ( $y$ -axis) and the number of hours spent with them ( $x$ -axis). To describe a teacher's load in terms of pupil-recitation hours is to give only a partial conception of the load. From that product alone it cannot be determined whether the teacher's load is comparable to the Irishman's farm—"a mile long and a foot wide"—or whether it

TABLE I  
SUMMARIES OF DISTRIBUTIONS OF JUNIOR HIGH SCHOOL TEACHERS ACCORDING  
TO TEACHING LOAD MEASURED BY NUMBER OF WEEKLY PUPIL-RECITATION  
HOURS AND BY NUMBER OF DIFFERENT PUPILS IN THEIR CLASSES

MEASURE	TEACHERS OF ACADEMIC SUBJECTS (83)	TEACHERS OF COMMERCIAL SUBJECTS, HOME ECONOMICS, AND SHOP (37)	TEACHERS OF PENMANSHIP, PHYSICAL EDUCATION, FINE ARTS, GUIDANCE, AND DRAMATICS (25)	ALL TEACHERS (145)
Number of Weekly Pupil-Recitation Hours				
Lowest number.....	370.0	137.0	363.0	137.0
First quartile.....	698.4	368.8	656.3	566.1
Median.....	831.3	445.8	775.0	752.5
Third quartile.....	897.8	593.8	879.2	871.9
Highest number.....	1,215.0	844.0	1,165.0	1,215.0
Number of Different Pupils in Classes				
Lowest number.....	74.0	46.0	191.0	46.0
First quartile.....	150.8	116.3	396.3	150.3
Median.....	171.3	167.5	445.0	179.6
Third quartile.....	197.5	217.5	607.5	248.8
Highest number.....	395.0	595.0	895.0	895.0

is of dimensions more practicable for tillage. This article is intended primarily to call attention to the *dimensions* of the teacher's load.

Distributions of the teachers according to the number of pupil-recitation hours and the number of different pupils in the classes were made, and the summaries are presented in Table I. First, distributions of the teachers were made for each subject separately, and the teachers were then classified in three groups as shown in the table, the basis for the grouping being primarily the similarity of the distributions. The number in parentheses at the head of each column is the number of teachers involved. These summaries disclose several items of significance. In weekly pupil-recitation hours the teachers

of academic subjects seem to have about the same load as the teachers of penmanship, physical education, etc., (third group). Both these groups exhibit wide variation, but the five measures of each distribution coincide rather markedly. The second group—teachers of commercial subjects, home economics, and shop—have a much smaller load according to the criterion of weekly pupil-recitation hours. This fact is accounted for primarily by the smaller classes prevailing in these subjects. However, when one studies the teaching

TABLE II  
SUMMARIES OF DISTRIBUTIONS OF TEACHERS ACCORDING TO  
AVERAGE SIZE OF CLASS

Measure	Teachers of Academic Subjects (83)	Teachers of Commercial Subjects, Home Economics, and Shop (35)	Teachers of Penmanship, Physical Education, Fine Arts, Guidance, and Dramatics (24)	All Teachers (142)*
Lowest average.....	14.8	10.1	14.1	10.1
First quartile.....	27.9	14.3	27.0	20.8
Median.....	32.4	16.9	32.7	30.8
Third quartile.....	35.6	21.1	35.3	34.7
Highest average.....	40.5	33.8	40.0	40.5

\* The number of teachers is not the same in all tables because a few blanks were not completed in every detail.

load according to the second criterion—number of different pupils in the classes—one is struck by the resemblance of the first two groups and their sharp contrast with the third. The interquartile range for the academic teachers is less than fifty, while for the teachers of the second group it is over one hundred, but the medians of the two groups nearly coincide. The median of the third group is over 2.5 times as large as the medians of the other two groups. Table I indicates that the two measures of teaching load yield somewhat diverging results. That this divergence is due in part to the variation in the number of times a week that the classes meet is evident from the average number of classes met by the teachers of each of the three groups, namely, academic, 5.82; commercial, home economics, and shop, 10.34; penmanship, etc., 17.29.

The influence of size of class on these measures of teaching load is evident from the distributions of the teachers according to average size of class. Summaries of these distributions are shown in Table II. The classes in the first and third groups appear to be almost identical



in average size. The second group of teachers have much smaller classes, the median of the distribution being approximately half as large as the medians of the other two groups. Since, however, they meet almost twice as many classes as do the academic teachers, the teachers in the second group meet about the same number of different pupils in the course of a week. While the average class of the teachers of the third group is almost the same in size as the average class of the academic teachers, the former teachers meet approximately three times as many class groups as the latter. This fact causes the big contrast in the number of different pupils in the classes that is shown in Table I.

The divergence between the number of pupil-recitation hours and the number of different pupils in the teachers' classes is further illuminated by Table III, which shows how frequently teachers in the

TABLE III  
SUMMARY OF DISTRIBUTIONS OF TEACHERS ACCORDING TO NUMBER  
OF TIMES A WEEK THAT THEY MEET PUPILS IN CLASSES

Measure	Teachers of Academic Subjects (83)	Teachers of Commercial Subjects, Home Economics, and Shop (37)	Teachers of Penmanship, Physical Education, Fine Arts, Guidance, and Dramatics (25)	All Teachers (145)
Lowest number.....	2.01	1.16	1.00	1.00
First quartile.....	4.79	2.01	1.23	2.08
Median.....	5.03	2.58	1.68	4.72
Third quartile.....	5.07	4.28	2.01	5.05
Highest number.....	8.29	10.00	2.22	10.00

three groups meet their pupils. In the preparation of this table each teacher's weekly load in pupil-recitation hours was divided by the number of different pupils in his classes. The teachers of each group were then distributed according to these quotients. The summary of the distributions shows that the median academic teacher meets his pupils approximately twice as frequently as does the median teacher of the second group and three times as frequently as does the median teacher of the third group. This ratio is the reverse of that which has just been mentioned in connection with the number of classes met by the three groups of teachers.



These contrasts in instructional load are further illustrated by the facts concerning three individual teachers given in Table IV. The last column shows how nearly identical are the loads of these teachers when measured by the number of weekly pupil-recitation hours taught; yet the art teacher teaches almost ten times as many pupils as the teacher of stenography and typewriting and has one-tenth as many contacts with his pupils. Between these two is the mathematics teacher who must know slightly more than one-fifth as many

TABLE IV  
INSTRUCTIONAL LOADS OF THREE INDIVIDUAL TEACHERS

Subject Taught	Number of Different Pupils in Classes	Number of Times a Week Pupils Are Met	Number of Weekly Pupil-Recitation Hours
Art.....	557	1	557
Mathematics.....	120	5	600
Stenography and typewriting.....	61	10	610

pupils as the art teacher and has five times as many contacts with his pupils.

It may seem gratuitous to submit further comparisons of teaching load measured by the weekly pupil-recitation hours and by the number of different pupils, but the expression of the relation of these two measurements in a coefficient of correlation affords a summary which will be appreciated by some readers. Calculation by the Pearson product-moment formula yielded the following coefficients: for 83 academic teachers, .51; for 62 special teachers, .66; for all teachers, .24. Of the eighty-three academic teachers, fifty-four met all their classes five days a week and none met any pupil in more than one class. For this considerable number in the group, then, there was a perfect positive correlation between the two measures. The remaining twenty-nine were scattered more or less over the correlation table because of the fact that a number of courses in social science, natural science, geography, and mathematics were offered two and four times a week. Most of the special teachers were teaching classes meeting one or two periods a week. The scatter diagram of this group showed a rather wide diagonal path, but very few cases fell in

the second and fourth quadrants. When the two groups were treated as one, the relation between the two measures was slight. Apparently, if the number of pupils a teacher must meet is considered an important determinant of the efficacy of educational effort, that factor must be measured directly in such junior high schools as are here studied; its measurement cannot be inferred from a count of pupil-recitation hours.

*Measuring load by a teacher-pupil contact quotient.*—It has been pointed out that the teacher's opportunity to know a pupil varies directly with the number of contacts he has with the pupil and inversely with the number of pupils whom he meets. By their very nature these factors operate together, and each depends on the other. They are largely obscured when multiplied and expressed as pupil-recitation hours. If they are divided, however, the quotient is a quantitative expression which reveals correctly the net result of the influence of these factors. These factors have been shown separately in Tables I and III; they will be shown in their combined effect in a later table.

What has been termed a "teacher-pupil contact quotient," which would represent each teacher's load, was arrived at by dividing the number of pupils met a week by the number of times they were met. This procedure was simple in the case of those teachers who taught a subject in which they met all their classes the same number of times and no pupil came to them in more than one class. However, in the case of a teacher whose load consisted, let us say, of five classes meeting four times a week and one class meeting five times a week, the following formula had to be used with each of the two groups:

$$\frac{\text{Number of pupils met a week}}{\text{Number of times met a week}} \times \frac{\text{Total number of periods comprising teacher's weekly load}}{\text{Total number of periods a week devoted to this group}}$$

The two resulting quotients were then combined in a weighted arithmetic mean, each quotient being weighted according to the number of the teacher's weekly load of teaching periods to which it applied. Using the hypothetical case just mentioned and assuming

that thirty pupils were enrolled in each of the classes, we secure the following result.

$$\frac{30 \times 5}{4} \times \frac{25}{20} = 46.9$$

$$\frac{30}{5} \times \frac{25}{5} = 30.0$$

$$\frac{(46.9 \times 20) + (30.0 \times 5)}{25} = 43.5$$

In the case of the teacher who met some of the pupils of a class in another class, it seemed impossible to work out a quotient, and such teachers were omitted. The loads of the teachers were so specialized,

TABLE V

PERCENTAGE DISTRIBUTIONS OF TEACHERS ACCORDING TO THE TEACHER-PUPIL CONTACT QUOTIENTS WHICH THEIR TEACHING LOADS REPRESENT

TEACHER-PUPIL CONTACT QUOTIENT	PERCENTAGE OF TEACHERS					
	Academic Subjects (78)	Commercial Subjects (10)	Shop (15)	Home Economics (9)	Penmanship, Physical Education, Fine Arts, and Guidance (18)	All Teachers (130)
0.0- 9.9.....	0.00	30.00	6.67	0.00	0.00	3.08
10.0- 19.9.....	6.41	0.00	6.67	0.00	0.00	4.62
20.0- 29.9.....	16.67	30.00	0.00	0.00	0.00	12.31
30.0- 39.9.....	47.44	10.00	13.33	0.00	0.00	30.77
40.0- 49.9.....	16.67	10.00	0.00	0.00	0.00	10.77
50.0- 99.9.....	6.41	20.00	46.67	33.33	0.00	13.08
100.0-149.9.....	3.84	0.00	0.00	66.67	0.00	6.92
150.0-199.9.....	2.56	0.00	0.00	0.00	5.56	2.31
200.0-299.9.....	0.00	0.00	26.67	0.00	50.00	10.00
300.0-899.9.....	0.00	0.00	0.00	0.00	44.44	6.15
Total.....	100.00	100.00	100.01	100.00	100.00	100.01

however, that quotients could be figured for 130 out of 145. Most of the teachers who taught in more than one department did not meet any pupils in more than one of their subjects.

Table V shows a strikingly wide range of teacher-pupil contact quotients. It will be seen that a small quotient means intimate contact between teacher and pupil, while a large quotient means slight contact. Three commercial teachers have quotients which place

them in the first interval of the distribution. Their quotients are 4.8, 5.1, and 6.1, since they met 48, 51, and 61 pupils, respectively, and met each pupil ten times a week. Each of these teachers had three classes in stenography and the same three classes in typewriting. At the other end of the distribution four teachers have quotients between 700 and 900. They taught classes in guidance, which, in accordance with the state course of study, met once a week.<sup>1</sup>

The majority of the academic teachers have quotients ranging between 10.0 and 49.9, inclusive. The scattering individuals in that column with quotients notably larger are teachers who met from 234 to 395 pupils a week in courses which were scheduled for less than five times a week. The quotients of the eighteen teachers of penmanship, physical education, fine arts, and guidance show the result in teacher-pupil contact when teachers have many pupils and meet them but once or twice a week. These teachers have about one-fiftieth or one-hundredth the opportunity to get acquainted with their pupils that the three commercial teachers have. Thus, the teacher-pupil contact quotient throws into sharp relief the very factors in the teaching load which are lost to sight in the calculation of pupil-recitation hours.

*Interpretation.*—In harmony with the trend of industrial civilization toward specialization and therefore expertness in a narrow field of endeavor, we have been moving rapidly in our schools toward finer and finer specialization of the teacher's work. In addition to the horizontal division, there is a vertical division which follows the lines of cleavage between the various subjects of the adult-organized world. Perhaps we have been dimly aware of the fact that such specialization narrows the teacher's load on the *x*-axis (number of contacts with pupils), but it seems that we have not been particularly aware of the lengthening of the teacher's load on the *y*-axis (number of different pupils met). Unless the public is willing to shoulder larger instructional costs, the shortening of the *x*-axis inevitably means a complementary extension of the *y*-axis. Specialization in

<sup>1</sup> These guidance teachers actually taught twelve, twelve, sixteen, and twenty periods a week, respectively, and devoted the remainder of their time to counseling and administrative work in their schools. In order that they might be included in this study, they were equated to a theoretical teaching load of twenty-four periods. Three other part-time teachers were similarly equated.

teaching, as in the automobile industry, simply means that the worker makes slight contact with many units of the product instead of many and extended contacts with a few units. One of the alleged advantages of large factories and large schools is that they facilitate this specialization. Is the school properly analogous to the factory? If so, to what degree does the analogy hold?

Obviously, such questions open up large issues in education. Several of these were ably stated and argued by Spain and Bonser a few years ago in their exposition of the merits and disadvantages of the platoon school.<sup>1</sup> Regardless of the clash of philosophies over the issue of specialization in the teaching load, the recent scientific demonstrations of individual differences in capacities, interests, achievements, and environments have created more general acceptance than ever before of the concept that thorough knowledge of the pupil largely conditions the effectiveness of our efforts to educate him. How many pupils the teacher can know and how many contacts he needs with his pupils in order to know them are questions which are hard to answer, but it is a fact that junior high school teachers are frequently heard distressfully expressing their inability to know the individuals in the changing crowds which face them.

Knowing the pupil seems peculiarly basic to education in the junior high school. With its special purposes of exploring the abilities of the pupil and guiding him as he makes the transition from common to differentiated education, this school must make it possible for the staff to observe and assay the individual pupils. In order that guidance may be successfully carried forward, the stage must be set so that the pupil may stand revealed to the teacher and so that the teacher may interpret the pupil to himself in terms of the varied opportunities which school and the world have to offer.

Perhaps one of the first and easiest steps which might be taken to achieve more intimate contact of teacher and pupils would be to place all or nearly all subjects on a five-day-a-week schedule. This plan would not involve a notable shift in educational theory, but it

<sup>1</sup> a) Charles L. Spain, "The Platoon School and the Superintendent," *Teachers College Record*, XXVII (December, 1925), 293-305.

b) Frederick G. Bonser, "Reasons for My Objections to the Platoon Plan," *Teachers College Record*, XXVII (December, 1925) 306-10.

would give to teaching loads generally such dimensions as characterize the loads of academic teachers in the senior high school. Some schools follow such a policy in scheduling; one which has been described in considerable detail is the junior high school at Okmulgee, Oklahoma.<sup>1</sup> It will, of course, be evident that, when courses are thus made more intensive, the teacher's contact with the pupil will not extend over so long a period of time. For example, the required course in art might be completed in one semester instead of two years. With such a schedule the teacher might be meeting 120 pupils five days in the week, but he would have entirely new groups of pupils every half-year. Whether or not this arrangement would in the long run give the teacher a better chance to study the pupil is difficult to say.

A more radical step for the promotion of pupil diagnosis by the teacher would be such an arrangement of the teacher's load that he would teach the pupil in more than one subject. That policy would be diametrically opposed to the current and almost unanimously accepted policy of specialization. It might even become a concession to "project" or "situation" teaching. At present, we are prone to lament the existence of teaching positions in which the teacher must teach in two or more subject fields. Very few such positions exist in the Johnstown junior high schools, and, as is probably true in most cities, when the teacher has a mixed load, he seldom has the same pupil in two classes—to say nothing of teaching a whole class in two subjects. The three teachers of stenography and typewriting are marked exceptions.

Those who have advocated that the teacher should teach the same classes in two or more subjects have, on the whole, been concerned with the realization of more favorable situations for the functioning of the educational process. They have been urging the utilization of "natural expressional situations," the acquisition of tools under the motivation of felt need, and the application of knowledge or ability in experiences which have reality for the pupil. Actual examples of organization of the teaching load in secondary schools to achieve these ends are seldom found, but one which was recently quoted at

<sup>1</sup> Herbert B. Bruner, *The Junior High School at Work*. Teachers College Contributions to Education, No. 177. New York: Teachers College, Columbia University, 1925.

length in the editorial section of the *School Review* may well be referred to and an extract requested here.

In the junior high schools of Seattle, according to the *Seattle Educational Bulletin* issued by authorities in the school system of that city, social science and English are taught by the same teacher. Two definite advantages are believed to derive from this arrangement:

"1. The social-science period of itself is too brief for the development of the valuable activities that grow naturally out of the content material.

"2. The social-science content yields the best of subject matter for composition work. The live situations which authorities on English insist are essential for effective language-teaching under skilful motivation and handling arise out of social-science content."<sup>1</sup>

Other large gains of such scheduling of teacher's and pupil's activities—the gains which are of primary concern here—are that the teacher is required to become acquainted with fewer pupils and that he has more contacts with the pupils in his classes. It gives him larger opportunity to observe, test, and explore the human material which is before him. Instead of a blurred vision of many young faces, he has the chance to see clearly delineated personalities possessing the wide variation of talents which the world needs. He has the chance to promote individual happiness and social welfare by helping his pupils find their optimum opportunity in the social order because he more fully apprehends their interests, capacities, and limitations. These are school conditions the value of which cannot be gainsaid. The realization of such conditions should constitute a primary criterion to govern the administration of the teaching load.

<sup>1</sup> "Correlation of Social Science and English in Seattle," *School Review*, XXXIX (June, 1931), 412.



## THE CONCEPT OF GUIDANCE

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*Guidance an expanding concept.*—One may still encounter those who regard the guidance movement as a passing fancy of the schools, as is witnessed by a writer who named a popular article dealing with vocational guidance and vocational education "The Newest Fad in Education."<sup>1</sup> The movement, nevertheless, continues to gain strength, fostered by a number of potent forces over many of which the school has little or no basic control. Among these are the recent rapid influx of the population of appropriate ages into secondary schools and into colleges, the broadening of the curriculum (including opportunities for occupational training and the extra-curriculum), advancing specialization in occupational life, the cityward movement of the population, and the changing status of women. First consciousness of the need for guidance expressed itself in advocacy and development of vocational guidance, but recent years have seen the recognition of other phases. Generous expansion beyond the concept that would restrict guidance to vocation is unquestionably desirable, but in certain quarters the concept has swelled to such proportions that it threatens to engulf all education. The danger of this expansion is that we shall lose sight of guidance in its proper sense. The discussion to follow is presented in the interest of clarification of the issues concerned.

*The statement of the concept.*—Properly understood, the concept of guidance has two main phases: (1) the *distributive* and (2) the *adjustive* phases. In discharging the former phase, we aim to distribute youth as effectively as possible to educational and vocational opportunities, that is, to subjects (or courses), curriculums, extra-curricu-

<sup>1</sup> *World's Work*, LVII (December, 1928), 184-91.

lum activities (which may be thought of as expansions of the curriculum), schools, higher institutions, and vocations. In the second phase we help the individual to make the optimal adjustment to educational and vocational situations. The meaning of the term "educational and vocational" as used in qualifying the concept is explained in the next paragraph. The two phases of distribution and adjustment are complementary. They also bear reciprocal relations to each other, as when a recommended change of subjects in a pupil's program dispels a maladjustment or when stimulation of the pupil to better performance (through adjustive efforts by guidance workers) in a particular subject field removes an obstacle to the pupil's admission to a particular curriculum.

As already indicated, the expression "educational and vocational" as applied to guidance requires some explanation. Guidance in relation to vocation is only one portion of the whole program, although a most important portion. The word "educational" is understood to comprehend preparation for vocation and to admit additional relationships no less important than the vocational. Other major aspects of life which may be listed and in which guidance must be provided in order to make it sufficiently inclusive are the recreational aspect, health, and that broad and composite aspect that may be designated as the civic-social-moral.

It is in the nature of the distributive phase of guidance to be concerned primarily with those activities of life in which differentiation is the rule. The first of these historically to be pressed on our attention was vocation: hence, the early dominance of "vocational guidance" to the unfortunate exclusion of other aspects of life. A second aspect much characterized by differentiation is that concerned with avocation, or the use of leisure, and we have recently come to appreciate the need of distribution here, that is, the need of guidance in the selection of courses and extra-curriculum activities related to this increasingly important aspect of complete living. The physique and health, too, may call for some differentiation, the special needs of the individual in this respect being in part conditioned both by his vocation and by his leisure-time activities. At the same time, differentiation, and therefore distribution, is probably less the rule in matters relating to health than those relating to vocation and

recreation. On account of the needs of integration in the civic-social-moral relationships of life—the large remaining group—these needs are served by an increasing proportion of constant courses and content. The distributive phase of guidance is, therefore, less pertinent here than elsewhere. The adjustive phase is, on the other hand, pertinent and necessary across all life's relationships, as these have been grouped here, without regard to the appropriateness of differentiation.

At the risk of repetition, reference may again be made to the ineptitude of the phrase "educational and vocational guidance." To those who meet it for the first time, this phrase is likely to suggest that the "educational" guidance referred to has to do only with that education which relates to vocation. This interpretation, as just pointed out, is an all-too-meager conception of what should now be comprehended by such a term. It seems difficult, however, to hit on a brief phrase that at once avoids this undesirable connotation and comprehends the whole of the guidance concept as here expounded. In this dilemma it is preferable to designate this process of education simply as "guidance" and to apply qualifying terms, such as "curriculum" or "vocational," when the intention is to refer to specific kinds of guidance.

A further component of the concept of guidance should be mentioned, namely, its monitory character. Guidance and arbitrary compulsion are incompatible. Guidance implies counsel, and the only compulsion possible in counsel is the coercion of judgment by pertinent facts that point the way to proper decision. For example, guidance should aid the pupil in making selections from the variable subjects in a program of studies; it will not designate which of the variables he must take. A great deal could be made in this discussion of the consonance of the spirit of guidance and of democracy.

*Delimiting the scope of guidance.*—The foregoing concept of guidance is broad, but, as may be inferred from what was said in the opening paragraph, one who reads at all widely in the literature of the field will often meet with concepts of guidance much broader. The conviction of the writers, as already suggested, is that some of these concepts are so broad that they direct attention away from guidance proper and therefore endanger the performance of the

guidance function. To assist in clarifying the concept and the understanding of what constitutes a legitimate guidance program, the relation of guidance to certain features of the school will now be briefly canvassed.

1. Guidance has significant contacts with attendance, but it does not include control of attendance. The guidance worker may inquire into the causes of persistently irregular attendance of individual pupils and may recommend corrective treatment, but, unless the incumbent is both guidance worker and attendance officer (as may sometimes be the case, especially in small schools), he does not administer the treatment.

2. Guidance proper bears important relations to discipline and social conduct, but it should not be confused with disciplinary control or oversight of social conduct. These are within the province of teaching and of administration other than guidance. The guidance worker will be called on to make diagnoses of disciplinary cases and maladjusted pupils and to recommend treatment to teachers and administrators, but, unless he is both guidance worker *and* teacher or guidance worker *and* other administrative functionary in some combination position, application of the recommendations will not fall to him.

3. Guidance and methods of teaching may at times have elements of procedure in common, but teaching cannot often be guidance and guidance does not comprehend methods of teaching. Classroom teaching becomes guidance only in some instances, as when the teacher gives instruction in courses in occupations or exploratory courses or administers and interprets prognostic tests for guidance purposes. Diagnostic teaching involving analysis of the needs of particular pupils makes use of the case method which is also employed in the work of guidance. However, normal diagnosis used in the best modern teaching is not guidance, even though the guidance worker, because of his special knowledge of testing, is sometimes called on to aid the teacher in employing the new procedures involved. Special study of an individual because of the failure of normal methods to discover difficulties may be properly classified as guidance in its adjustive phase.

4. Supervision is concerned with the improvement of teaching

and is not guidance for the same reasons that methods of teaching should not be so classified. Nevertheless, the fact that supervision and guidance have certain procedures of inquiry in common indicates important relations between them.

5. Again, curriculum-making and guidance must take cognizance of each other, but the work of curriculum-making is not guidance. Curriculum-makers will need to have at hand all necessary information concerning the nature of the student-body, this information presumably being supplied by the guidance workers. They will also map out, with the aid of the guidance workers, exploratory courses and courses in vocational information. Guidance activity proper appears when, after a study of the individual pupil, adjustments in his program are made the better to serve his needs, as when he is advised to shift from one subject or curriculum to another or when recommendation is made of certain substitutions in his regular class work.

6. Although guidance and vocational training must be intimately interrelated, vocational training is not guidance. At times the pursuit of a vocational curriculum or subject will give a pupil the basis for deciding for or against a vocational choice previously made. But determining the content of vocational courses or the methods to be used in teaching these courses is not guidance. Guidance steps in when aid is given in the choice of subjects or a curriculum preparing for a particular vocation.

7. Allied (extra-curriculum) activities and guidance have vital points of contact, but neither these activities themselves nor the work of sponsoring them is properly classifiable as guidance. No essential reason can be presented for regarding these activities as more largely in the realm of guidance than the curriculum or teaching, of which they are the less formal analogues. Like the curriculum, they serve in a guidance relationship only when they supply the experience required for an informed choice of activities or contribute to the discovery of special interests and abilities.

The upshot of the matter is that guidance is not the whole of education. The term should not even be regarded, as some seem to regard it, as a beneficent synonym for education. It represents one

aspect only of the process of education, notwithstanding that the aspect represented is momentous. The scope of guidance cannot be understood to comprehend in any large measure the other processes or features of the school, such as teaching, supervision, curriculum-making, vocational training, or the extra-curriculum. At the same time, as the illustrations given have indicated, there are vital points of contact that permit the guidance program to enhance the service of these features, or vice versa. The type of expansion of the concept that would include these other features of the school is sheer inflation. With respect to legitimacy such expansion is in unfavorable contrast to the type of expansion admitted in the earlier discussion—expansion which extends guidance to include distribution and adjustment of pupils to the full scope of life-activity, inclusive of vocational, recreational, health, and civic-social-moral relationships.

One explanation of the current confusion of guidance with other features or activities of the school is the fact, already intimated, that certain workers in the schools serve as combination functionaries, being called on to render service in guidance and in some other activity, such as teaching, controlling attendance, and directing the extra-curriculum. Such a combination of duties is often inevitable and desirable, but it is important that the different services be differentiated in the thinking of such functionaries and of those in charge of the school in order that guidance in the correct sense be not neglected.

*Instances of illegitimate extension of the concept.*—Further clarification of the concept of guidance will be aided by applying the concept proposed to a few of the types of statements descriptive of guidance programs that may be encountered in a canvass of the literature of the subject.

1. In a statement descriptive of guidance in a junior high school, the following appears.

Organized guidance here is along four lines: educational, social, vocational, and moral.

1. *Educational.*—The educational counselor assisted by two other teachers has charge of the advisory work. She has careful personal interviews with every 9 A pupil after having studied his records both of work and of home con-

ditions. When he leaves, he has a complete high-school course worked out leading to the thing he thinks he is preparing for. The other advisers help the 8 A's and 7 A's in choosing their elective subjects.

2. *Social*.—One grade remains out of assembly each day. During that time many discussions are held, and demonstrations made concerning table manners, social practices, business etiquette, thrift, safety, first aid, and in many other lines.

3. *Vocational*.—Only occupational information is given systematically through occasional talks by outsiders, and visits to industries are arranged.

4. *Moral*.—The Guidance Committee issues a bulletin once a month suggesting a topic for discussions in the civic meetings. These are broad topics, such as property rights, honesty, fair play, thoroughness, etc. An aim and a general outline are given and a school situation which may be illustrative. The home-room teachers may handle the discussion in any way they please. A general appeal is made to the faculty to keep this topic somewhat before the children in classes when its discussion is appropriate, but they are cautioned not to drag it in.

The "educational" guidance referred to in the first paragraph appears to relate solely to what is often termed "curriculum" guidance, that is, the selection of courses to make up a curriculum. If it is assumed that "the thing he thinks he is preparing for" is a vocation, this work is chiefly a phase of vocational guidance. The third paragraph, also, pertains to vocational guidance. The second and fourth paragraphs list a variety of civic-social-moral activities and relationships, but the description of what is done suggests that it is *giving instruction* in the matters mentioned rather than *guidance*. The fact that these matters are taken up in the less formalized parts of school life, that is, in the assembly or in the home room and not in the classroom, can hardly be presented in support of a contention that they constitute guidance. The writers would not disparage these social and moral activities. Such activities recognize neglected aspects of child training, but they do not fall within the scope of guidance properly defined.

2. Following are the "objectives of guidance" proposed in a recently published outline of a guidance program for Grades VII-XII, inclusive.

1. To develop the ability to be a helpful member of a family. (Consisting in sharing responsibilities and privileges.)

2. To develop the ability to benefit from the experience of others and to



improve upon them so that others may benefit from us. (Consisting in learning to read, write, figure, and think.)

3. To develop the ability to perform our obligations as helpful neighbors and intelligent citizens. (Consisting of thorough understanding and appreciation of the ideals of citizenship and neighborliness.)

4. [To develop] the ability to form right habits of conduct based on worthy principles and ideals. (Consisting in honesty, loyalty, justice, reverence, etc.)

5. To develop the ability to build up and conserve our health and to utilize our free time wholesomely. (Consisting in an appreciation of health laws, healthful exercise, good music, art, literature, etc.)

6. To develop the ability to choose the right vocation which will enable us to express ourselves fully, render the best service to others, and earn a comfortable living. (Consisting in right motives, knowledge of occupation, and self.)<sup>1</sup>

This quotation represents a clear case of almost losing sight of guidance proper and identifying it with all education. The only one of these objectives at all concerned with the distributive phase of guidance is the sixth, which relates to guidance concerning vocation. The remainder, cast in terms of developing abilities along various lines, are nothing more than restatements of desirable objectives of the training program and appear to have no more to do with the adjustment phase of guidance than any other well-formulated statement of the objectives of education.

*A program of guidance in harmony with the concept.*—The writers do not undertake to map out here in any detail the program of guidance designed to comport with the concept they advocate. However, the main lines of the program may be indicated. (1) Such a program would provide for giving pupils information concerning educational and vocational opportunities. (2) It would secure pertinent and reliable information concerning pupils. (3) By developing the guidance program along these two lines, the guidance workers of the school would be ready to guide the individual pupil. It is in the nature of guidance to culminate in the individual. (4) While deciding on the activities to be included in the program, those in charge of the schools must also organize the guidance service by

<sup>1</sup> *Tentative Outline for a Guidance Program for Grades Seven to Twelve, Miami County, Ohio*, p. 8. Prepared by the Miami County Vocational Guidance Association (Maurice J. Neuberger and D. H. Sellers, supervisors and editors). Troy, Ohio: Miami County Board of Education, 1931.

designating the guidance functionaries and the responsibilities to be assigned to each.

The array of activities already being carried on which fall within such a concept of guidance as is here advocated and which are classifiable under the four major divisions just listed is extremely diverse. No one could contend that all these activities have passed muster on careful procedures of appraisal. In fact, few activities in guidance have been sufficiently evaluated, and all are probably still subject to appraisal and certainly to refinement through further experimentation and other investigation. However, we now carry on in the schools many practices in other aspects of the educative process on which the work of appraisal and refinement is still incomplete. The need of carrying on the work of guidance and of these other parts of the educational program is so urgent as to recommend doing what we can in the light of present knowledge.

## OVERLAPPING OF CONTENT IN TEXTBOOKS IN GENERAL SCIENCE AND BIOLOGY

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The science curriculum in high school is undergoing frequent change and revision. The trend has been to require general science in the ninth grade, to require biology in the tenth grade, and to offer physics and chemistry as electives in the eleventh and twelfth grades. Authorities in the field of science-teaching are in agreement that the science curriculum should develop a definite sequence from year to year and from unit to unit in order that pupils may be prepared to meet problems of increasing difficulty as they advance from course to course. The purpose of the study reported in this article was to determine whether present courses in general science and biology are articulated, providing opportunity for pupils to meet problems of increasing difficulty as they advance.

### METHOD OF PROCEDURE

The method was to make an analysis of textbooks used in general science and biology and to determine the amount and nature of the overlapping in these books. The following textbooks were analyzed in detail.

Otis William Caldwell and Francis Day Curtis, *Introduction to Science*. Boston: Ginn & Co., 1929.

Otis W. Caldwell and William Lewis Eikenberry, *Elements of General Science*. Boston: Ginn & Co., 1918 (revised).

Charles John Pieper and Wilbur Lee Beauchamp, *Everyday Problems in Science*. Chicago: Scott, Foresman & Co., 1925.

William Henry Snyder, *General Science*. Boston: Allyn & Bacon, 1925.

George C. Wood and Harry A. Carpenter, *Our Environment: How We Use and Control It*. Boston: Allyn & Bacon, 1927.

Benjamin Charles Gruenberg, *Biology and Human Life*. Boston: Ginn & Co., 1925.

George William Hunter, *New Civic Biology*. Chicago: American Book Co., 1926.

Truman J. Moon, *Biology for Beginners*. New York: Henry Holt & Co., 1926 (revised).

W. M. Smallwood, Ida L. Reveley, and Guy A. Bailey, *New Biology*. Boston: Allyn & Bacon, 1924.

In the analysis of each textbook, a count was made of the number of lines of reading matter, the number of exercises, and the number of illustrations appearing under every paragraph heading. In the count of the number of lines, deductions were made for diagrams, illustrations, preliminary exercises, summary exercises, and paragraph headings. No deductions were made for experiments and exercises given in the textual content.

After the books had thus been analyzed, the material was classified under the sciences: biology, physics, chemistry, physiography, astronomy, and miscellaneous. The classification was determined subjectively by a careful study of the material and the application of predetermined definitions for each science. The material under each science was then further classified and subclassified. For instance, biology was classified under the following headings: human, plant, animal, and miscellaneous. Human biology was subclassified under physiology and hygiene, health and disease, ventilation and humidity, water supply and sewage disposal, foods, narcotics and stimulants, and heredity and eugenics.

The comparative treatment of each item of overlapping material in textbooks in general science and biology was studied, first, by a comparison of the space devoted to each topic and subtopic in each textbook in general science with the space given to the same topic and subtopic in the average textbook in biology and, second, by comparing the space devoted to each topic and subtopic of each textbook in biology with the space given to corresponding topics and subtopics in the average textbook in general science. From the data obtained, the space devoted to each topic and subtopic in the average textbook in general science was compared with the space given to corresponding topics and subtopics in the average biology textbook.

A textbook in general science may be very similar to the average textbook in biology with respect to the amount of space allotted a given topic, yet the material in the textbook in general science may

actually be very different from the material under the same topic in the textbooks in biology. In order that these possible differences might be discovered, it was necessary to make a direct comparison of each textbook in general science with each textbook in biology. Every topic and subtopic in each textbook in general science was carefully analyzed and compared with the corresponding material in each biology textbook. In a similar way every topic and subtopic in each biology textbook was carefully analyzed and compared with corresponding material in each textbook in general science. To illustrate, the 4,342 lines of biology in Caldwell and Curtis' *Introduction to Science* was compared with the 49,179 lines found in the four biology textbooks analyzed. In a similar way each textbook in general science was compared with the corresponding material in the biology textbooks. As biology textbooks contain some physics and chemistry, the 24,526 lines of physics found in the five textbooks in general science was compared with the 294 lines of physics given in the four textbooks in biology, and the 6,523 lines of chemistry in the five textbooks in general science was compared with the 1,318 lines of chemistry distributed among the four textbooks in biology. The same method was used in determining how the material in textbooks in biology is handled in books in general science. In all, each of the four textbooks in biology was compared with each of the five books in general science, and each of the five textbooks in general science was compared with each textbook in biology. Thus, a total of forty direct comparisons of all the overlapping material in textbooks in general science and biology were made.

This article deals with the material in the textbooks in biology that overlaps material in the textbooks in general science. The conclusions and implications in the article refer, therefore, primarily to textbooks in biology.

#### MATERIAL IN TEXTBOOKS IN BIOLOGY OVERLAPPING MATERIAL IN TEXTBOOKS IN GENERAL SCIENCE

The textbooks in biology contain little extraneous material, the average percentage of space given to biology being 96.8; to chemistry, 2.6; and to physics, 0.6. The average amount and nature of the content of the textbooks in biology is given in Table I. Table II

gives a comparison of the treatment given each of the three sciences in the average textbook in biology and in the average textbook in general science. Table II is read as follows: Seventeen per cent of the total amount of material given to chemistry in the average textbook in biology is given no treatment in the average textbook in general science; 65.8 per cent of the chemistry material in the average biology textbook is given brief and general treatment in the average textbook in general science; 13 per cent is given approximately identical treatment; and only 4.2 per cent is treated more completely in the average textbook in general science. The small

TABLE I  
AVERAGE AMOUNTS OF SPACE GIVEN THREE SCIENCES IN TEXTBOOKS IN BIOLOGY  
AND RATIO TO AVERAGE AMOUNTS OF SPACE GIVEN SAME SCIENCES  
IN TEXTBOOKS IN GENERAL SCIENCE

Classification	Average Number of Lines	Average Percentage of Space	Ratio to Space Given Same Subject in General Science
Chemistry.....	330	2.6	0.310
Physics.....	74	0.6	0.015
Biology.....	12,295	96.8	2.820
Total.....	12,699	100.0	.....

amount of physics found in the average textbook in biology is given as completely or more completely in the average textbook in general science. The average amount of biology contained in textbooks in biology is 96.8 per cent of the total. According to Table I this amount is nearly three times as much as the average space given this subject in the textbooks in general science. Table II shows that 45 per cent of this material is entirely different from that found in books in general science and that nearly 42 per cent is given a less complete treatment in books in general science. Approximately 12 per cent of all the material in the average book in biology receives identical treatment in the average book in general science, and only about 1 per cent is given more complete treatment in general science.

A study of Tables III and IV shows that nearly all the material on animal biology, most of the material on plants, and some of the

phases of physiology and hygiene are confined largely to textbooks in biology. Study of water supply and sewage disposal, ventilation

TABLE II

COMPARISON OF TREATMENT GIVEN THREE SCIENCES IN AVERAGE TEXTBOOK  
IN BIOLOGY WITH TREATMENT GIVEN IN AVERAGE  
TEXTBOOK IN GENERAL SCIENCE

Treatment in Books in General Science	Chemistry	Physics	Biology	All Sciences
None.....	17.0	0.0	45.0	44.0
Brief and general treatment. Approximately identical treatment.....	65.8	0.0	41.6	42.4
More complete or technical treatment.....	13.0	79.5	12.3	12.3
	4.2	20.5	1.1	1.3
Total.....	100.0	100.0	100.0	100.0

TABLE III

AVERAGE AMOUNTS OF SPACE IN TEXTBOOKS IN BIOLOGY GIVEN TO VARIOUS  
BIOLOGY TOPICS AND RATIO TO AVERAGE AMOUNTS OF SPACE GIVEN  
SAME TOPICS IN TEXTBOOKS IN GENERAL SCIENCE

Topic	Average Number of Lines	Average Percentage of Space	Ratio to Space Given Same Topic in General Science
Human biology:			
Physiology and hygiene.....	2,118.5	17.2	2.84
Health and disease.....	1,416.0	11.5	2.16
Ventilation and humidity.....	86.0	0.7	0.61
Water supply and sewage disposal	71.5	0.6	0.26
Foods.....	775.0	6.3	1.33
Narcotics and stimulants.....	317.0	2.6	3.70
Heredity and eugenics.....	264.0	2.1	7.14
All human biology.....	5,048.0	41.0	2.03
Plant biology.....	2,805.0	22.8	2.24
Animal biology.....	3,007.0	24.5	12.20
Miscellaneous biology.....	1,435.0	11.7	3.67
Total.....	12,295.0	100.0	.....

and humidity, foods, and the overlapping physics and chemistry are given as completely in the textbooks in general science as in the textbooks in biology—in some cases, more completely.



SIGNIFICANCE OF OVERLAPPING MATERIAL  
IN TEXTBOOKS IN BIOLOGY

When biology and general science are required of high-school pupils, a special effort should be made to articulate these courses. The biology teacher should know what was presented in general science, and the general-science teacher should have a fairly clear idea of the science experiences the pupils will have after completing his course.

TABLE IV

COMPARISON OF TREATMENT GIVEN BIOLOGY TOPICS IN AVERAGE TEXTBOOK  
IN BIOLOGY WITH TREATMENT GIVEN IN AVERAGE TEXTBOOK  
IN GENERAL SCIENCE

TOPIC	PERCENTAGE OF MATERIAL RECEIVING TREATMENT IN GENERAL SCIENCE				
	No Treatment	Brief and General Treatment	Approx- imately Identical Treatment	More Complete or Technical Treatment	Total
Human biology:					
Physiology and hygiene.....	35.4	50.4	13.4	0.8	100.0
Health and disease.....	38.7	42.9	18.4	0.0	100.0
Ventilation and humidity.....	0.0	0.0	30.2	69.8	100.0
Water supply and sewage disposal.	0.0	0.9	38.1	61.0	100.0
Foods.....	12.7	40.0	47.3	0.0	100.0
Narcotics and stimulants.....	11.6	88.4	0.0	0.0	100.0
Heredity and eugenics.....	77.2	22.8	0.0	0.0	100.0
All human biology.....	33.7	45.2	19.5	1.6	100.0
Plant biology.....	29.2	53.1	17.7	0.0	100.0
Animal biology.....	83.3	16.5	0.2	0.0	100.0
Miscellaneous biology.....	35.5	59.2	5.3	0.0	100.0

*Material given minor treatment in general science.*—Over 42 per cent of the material in textbooks in biology is treated less completely in general science than in biology. Illustrations of material of this type are photosynthesis in plants, life-processes (such as circulation, respiration, nervous system, and digestion), narcotics and stimulants, and heredity and eugenics. Overlapping of this type can be justified on the assumption that the less complete study in general science is of a nature prerequisite to that given in biology. The material given in general science should therefore be used as an approach to the new and more complex science experiences in biology.

The textbooks in biology which were analyzed show little evidence that the authors had in mind the desirability of articulation with general science. These textbooks would undoubtedly be far more effective if the authors had made conscious attempts to build the course in such a way that the courses in science would have continuity and would increase in difficulty commensurately with the pupil's ability. Each succeeding course should produce definite growth in the development of attitudes, ideals, and interests; in the ability to think; in manipulatory skills; and in the acquisition of worth-while knowledge.

*Material receiving major treatment in general science.*—Little of the material found in textbooks in biology receives more space in textbooks in general science. Water supply and sewage disposal and ventilation and humidity are the most outstanding topics that are given more space in textbooks in general science than in textbooks in biology. The value of including in textbooks in biology material that was given more completely in general science is highly questionable unless a definite effort is made to tie up the review items with new science situations.

*Material receiving identical treatment in overlapping books.*—Over 12 per cent of the material in the textbooks in biology is given identical treatment in the overlapping textbooks. Exact duplication is usually considered harmful; certainly, its value is highly questionable.<sup>1</sup> If this material is presented as a means of approach to new science situations in the course in biology, it should be given as a review and not as an exact duplication. Such a presentation should be less complete and more general than the original presentation and should be revised in content and method of approach so that it will tie up what has been learned in general science with the pupil's new experiences.<sup>2</sup>

Material in textbooks in biology which is given identical treatment in general science has possibly no justification in a biology course unless it is used to aid the pupil in approaching more ad-

<sup>1</sup> E. H. Westlund, "How To Get a Closer Relationship between the Chemistry of the High School and College," *School Science and Mathematics*, XXVI (January, 1926), 44-49.

<sup>2</sup> H. R. Douglass, *Modern Methods in High School Teaching*, pp. 63-64. Boston: Houghton Mifflin Co., 1926.

vanced science activities or unless it lends itself to a more advanced technical development in biology. Whether the material should be retained in general science or in biology depends largely on its social value and on the ability of the pupils to assimilate the material.

*Implications.*—In addition to the direct conclusions from the evidence, the following implications seem justified.

1. Most of the harm done by overlapping in textbooks in biology is due to the fact that the overlapping is haphazard and unplanned.
2. Analysis of textbooks in biology suggests that authors have given little attention to the question of overlapping.
3. The overlapping material receiving major emphasis in biology might possibly be considered desirable if it actually articulates with the earlier courses.
4. The overlapping material that receives major emphasis in general science can be justified if the review in biology is used as an application to new science situations.
5. Undoubtedly, identical treatment in general science and biology is undesirable. Much of this material, however, can be changed in such a way as to aid the pupil in other science activities; some of the material might be made more complete and technical in the course in biology; but that material which is presented merely for the sake of repetition should be confined to either general science or biology.

## ENGLISH PROGRAMS OF HIGH SCHOOLS IN IOWA

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All investigations of the curriculum indicate that English is universally offered in the program of studies in the senior high school. A recent study by Van Dyke shows that from 1906-11 to 1929-30 the percentage of increase in the number of different courses in English offered in thirty-five high schools is 233.<sup>1</sup> It is important to know what are the general practices in the English programs

TABLE I  
CLASSIFICATION, ACCORDING TO ENROLMENT, OF 257  
IOWA HIGH SCHOOLS STUDIED

Group	Enrolment	Number of Schools	Percentage of Schools
1.....	500 or more	18	7.0
2.....	100-499	88	34.2
3.....	99 or less	151	58.8
Total.....		257	100.0

which are showing this large expansion. The study reported in this article gives information concerning the work in literature and in composition in the English programs of 257 Iowa high schools in 1929. The high schools reporting are classified according to enrolment in Table I.

### LITERATURE

*Time devoted to literature.*—The schools included in this study reported the number of periods devoted to literature each week. The weekly number of periods were converted into percentages, five periods a week for thirty-six weeks being considered 100 per cent. In the schools in Group 1 the time devoted to literature in the ninth grade ranges from 40 to 80 per cent of the total amount of time given

<sup>1</sup> George E. Van Dyke, "Trends in the Development of the High School Offering," *School Review*, XXXIX (December, 1931), 740.

to English; in the tenth, eleventh, and twelfth grades, from 40 to 100 per cent. In 16 representative schools in Group 2 the time devoted to literature in the ninth grade ranges from 20 to 80 per cent; in the tenth grade, from 36 to 80 per cent; in the eleventh grade, from 40 to 100 per cent; and in the twelfth grade, from 22 to 100 per cent. In 21 schools typical of Group 3 the amount of time devoted to literature ranges from 0 to 60 per cent in the ninth and tenth grades and from 50 to 100 per cent in the eleventh and twelfth grades. Table II

TABLE II  
AVERAGE PERCENTAGE OF TIME DEVOTED TO LITERATURE IN ENGLISH  
PROGRAMS OF GRADES IX-XII IN IOWA HIGH SCHOOLS

Grade	Group 1*	Group 2†	Group 3‡	Average for All Groups
IX.....	52.1	40.9	30.5	39.4
X.....	62.5	48.5	29.0	44.6
XI.....	70.7	78.1	86.7	79.6
XII.....	82.5	76.4	86.7	82.3
All grades.....	67.7	61.0	58.2	61.7

\* The number of schools represented in Group 1 are as follows: Grade IX, 13 schools; Grade X, 15 schools; Grade XI, 14 schools; Grade XII, 16 schools.

† Sixteen schools are represented in Group 2.

‡ Twenty-one schools are represented in Group 3.

presents the practices in schools of Groups 1, 2, and 3 by grades.

*Use of a basic textbook in literature.*—Of 187 schools reporting in the three population groups, 35.3 per cent use basic textbooks in literature in the ninth grade; 37.5 per cent of 184 schools reporting use basic textbooks in the tenth grade; 93.6 per cent of 236 schools reporting use such books in the eleventh grade; and 91.4 per cent of 174 schools reporting make use of basic textbooks in the twelfth grade. Sixty-one different textbooks were reported by the schools included in this study. In the ninth and tenth grades books of the *Literature and Life* series by Greenlaw, Elson, Keck, and Stratton were mentioned more frequently than other books. Books by Long, Pace, and Halleck were reported most frequently in the eleventh and twelfth grades.

*The selections studied.*—The number of literary selections studied in class are surprisingly large: 155 selections in schools in Group 1,

246 in schools in Group 2, and 354 in schools in Group 3. Counts in a similar study of fifteen large high schools found that seventy-one selections were studied in class.<sup>1</sup> The selections reported by Counts to be those most frequently mentioned by these fifteen large high schools, the selections reported in the present study to be those

TABLE III

THE TWELVE LITERARY SELECTIONS FOUND IN IOWA HIGH SCHOOLS, THE TEN REPORTED BY COUNTS, AND THE FOURTEEN REPORTED BY STOUT TO BE THOSE MOST FREQUENTLY STUDIED RANKED ACCORDING TO NUMBER OF SCHOOLS USING EACH SELECTION

Selection	Rank in Iowa High Schools	Rank in Investigation Made by Counts*	Rank in Investigation Made by Stout†
As You Like It . . . . .	12	10	13
The Deserted Village . . . . .			11
Evangeline . . . . .			5
Gray's Elegy . . . . .			13
Hamlet . . . . .	11		10
The House of the Seven Gables . . . . .		7.5	
The Idylls of the King . . . . .	8	5	
Ivanhoe . . . . .	6	7.5	
Julius Caesar . . . . .	4	7.5	2
The Lady of the Lake . . . . .	5		9
Macbeth . . . . .	3	3	8
The Merchant of Venice . . . . .	2	7.5	1
Rime of the Ancient Mariner . . . . .	10	3	
Silas Marner . . . . .	1	1	
The Sketch Book . . . . .			5
Snowbound . . . . .			7
A Tale of Two Cities . . . . .	7	3	
Treasure Island . . . . .	9		
Thanatopsis . . . . .			13
Vision of Sir Launfal . . . . .			5
Webster's Bunker Hill Orations . . . . .			3

\* Adapted from George S. Counts, *op. cit.*, p. 41.

† Adapted from John Elbert Stout, *The Development of High-School Curricula in the North Central States from 1860 to 1918*, p. 137. Supplementary Educational Monographs, No. 15. Chicago: Department of Education, University of Chicago, 1921.

most frequently used in Iowa high schools, and the selections reported by Stout to be those most frequently used in earlier periods are given in Table III. The great similarity of the lists of selections most frequently studied as found by Counts and as shown in the present study is apparent. However, the similarity may be expected

<sup>1</sup> George S. Counts, *The Senior High School Curriculum*, pp. 41-42. Supplementary Educational Monographs, No. 29. Chicago: Department of Education, University of Chicago, 1926.

because of the recency of Counts's study. By way of further comparison, it may be interesting to note the findings of Stout, which are based on data from printed courses of study for the periods 1886-90, 1891-95, and 1896-1900. The similarity of the data of Counts, Stout, and of the present study is very striking.

Perhaps another significant point is the great emphasis placed on the works of Shakespeare. Both Counts and Stout pointed out the predominance of Shakespearian literature. Counts said, "While Shakespeare's works possess great literary value and while for certain rather highly selected types of pupils they might provide excellent training and lead to the development of wide reading interests, they are hardly suited to the abilities and the needs of the great masses of boys and girls who are finding their way into the high school."<sup>1</sup>

That the programs in literature show much variation is brought out clearly by the grade placement of selections. In the present study it was found that many selections are taught in all four years of high school and that there is much more lack of agreement in the literature programs of small high schools than in the programs of large high schools.

The facts indicate a wide range in the number of class periods devoted to individual selections. Apparently, the textbooks used, the available materials, and the procedures followed in teaching have some relation to the amount of time devoted to selections. The fact that a great amount of time is devoted to each selection leads to the conclusion that literature is taught by what Counts calls the "analytical method." Undoubtedly, present practices are not in harmony with that great objective of the study of literature, *extensive reading*.

#### COMPOSITION

*Time devoted to composition.*—A brief summary of the average amount of time devoted to composition is shown in Table IV.

*Use of a basic textbook in composition.*—That composition is primarily stressed in the ninth and tenth grades seems to be indicated by the fact that practically all schools have basic textbooks in com-

<sup>1</sup> George S. Counts, *op. cit.*, p. 40.



position in those grades, while only 23.1 per cent of the 117 schools answering for the twelfth grade have basic textbooks. Of 232 schools answering for the ninth grade, 96.6 per cent have basic textbooks in composition; of 230 answering for the tenth grade, 92.6 per cent; and of 150 answering for the eleventh grade, 45.3 per cent.

TABLE IV

AVERAGE PERCENTAGE OF TIME DEVOTED TO COMPOSITION IN ENGLISH  
PROGRAMS OF GRADES IX-XII IN IOWA HIGH SCHOOLS

Grade	Group 1*	Group 2†	Group 3‡	Average for All Groups
IX.....	41.0	59.1	69.5	58.8
X.....	37.9	51.5	71.0	55.5
XI.....	25.0	21.9	13.3	19.2
XII.....	23.6	23.6	13.3	19.4
All grades.....	31.8	39.0	41.8	38.2

\* The number of schools represented in Group 1 are as follows: Grade IX, 13 schools; Grade X, 15 schools; Grades XI and XII, 14 schools.

† Sixteen schools are represented in Group 2.

‡ Twenty-one schools are represented in Group 3.

TABLE V

AVERAGE NUMBER OF WRITTEN COMPOSITIONS REQUIRED EACH WEEK IN  
ENGLISH COURSES IN GRADES IX-XII IN IOWA HIGH SCHOOLS

GRADE	GROUP 1		GROUP 2		GROUP 3		AVERAGE FOR ALL GROUPS
	Number of Schools	Average Number of Compositions	Number of Schools	Average Number of Compositions	Number of Schools	Average Number of Compositions	
IX.....	14	1.2	72	2.2	133	1.6	1.8
X.....	17	1.1	76	1.3	123	1.6	1.5
XI.....	15	1.0	53	1.1	65	1.1	1.1
XII.....	16	1.5	45	1.0	48	1.3	1.2
All grades.....	.....	1.2	.....	1.5	.....	1.5	1.5

Sixty-seven different textbooks were reported by the schools included in this study. Only five books were mentioned more than twenty times. The following books were reported most frequently: (1) Tanner, *Composition and Rhetoric*, published in 1922; (2) Ward, *Sentence and Theme*, revised edition published in 1923; (3) Ward, *Theme-Building*, revised edition published in 1924; (4) Lewis and

Hosic, *New Practical English for High Schools*, published in 1925; and (5) Lewis and Hosic, *Practical English for High Schools*, published in 1916.

*Number of written compositions required each week.*—Table V shows the average number of written compositions required each week. The practices in large and small schools are rather similar.

*Use of supplementary textbooks and exercise books.*—Of 207 schools reporting for the ninth grade, 84.5 per cent use supplementary materials; of 206 reporting for the tenth grade, 75.2 per cent; of 118 reporting for the eleventh grade, 66.1 per cent; and of 95 reporting for the twelfth grade, 68.4 per cent. An unusually large variety of supplementary textbooks and exercise books is in use, a total of 194 being reported. It is apparent that much disagreement of opinion exists concerning the use of supplementary materials, as many books, exercises, and drills are used in all the grades and only two exercise books are used by more than fifty schools. Of all supplementary materials reported, Ward's *The M. O. S. Book*, published in 1926, and Ward's *Sentence Book*, published in 1923, are used most frequently. However, these two exercise books make up less than 20 per cent of the total number reported.

## Educational Writings

### REVIEWS AND BOOK NOTES

*A stimulating book on supervision.*—Supervision of instruction is a distinguishing characteristic of American educational administration. Beginning as an inspectorial endeavor aimed to protect the children from poor teaching, it has successively sought to direct and to improve the learning situation. In recent years two movements have influenced supervision. The scientific movement in education has stimulated the fact-finding approach to the improvement of instruction to such an extent that the word "scientific" is frequently linked with the word "supervision." Also, the psychology and philosophy which are basic to the modern "child-centered" school have penetrated the field of supervision—a fact which makes "democracy" and "growth" much-used supervisory terminology. Modern supervision seeks to be scientific, while its aim is to improve schools by promoting the growth of teachers. This type of supervision must utilize the results of scientific studies in curriculum, method, psychology, and administration. Books on supervision have for the most part been empirical considerations of supervisory devices. A recent volume by A. S. Barr, however, is a radical departure from traditional efforts in this field.<sup>1</sup>

The author indicates that one of his major objectives is "to present an integrated program of supervision utilizing the results of scientific research in the field of supervision and modeled on the simple pattern of science" (p. v). This pattern is roughly as follows: (1) determine the objectives of education, (2) survey the schools to learn what are the pre-supervisory products of learning, (3) search for causes of unsatisfactory pupil achievement, (4) train teachers so as to eliminate causes of unsatisfactory achievement and improve instruction, and (5) measure the results of supervision. There are chapters which deal with each of these steps and in addition a chapter which deals with the validation of the data-gathering devices. It is with the last-mentioned chapter that the reader will most frequently take issue.

The reviewer hesitates to invade the realm of the chapter on validation because of the lack of space in which to present fairly the author's position as well as any clear comment upon it. Briefly, Barr reviews the development of the more objective devices for gathering data with regard to teaching, such as

<sup>1</sup> A. S. Barr, *An Introduction to the Scientific Study of Classroom Supervision*. New York: D. Appleton & Co., 1931. Pp. xxvi+400. \$2.50.

check lists, activity analyses, and rating scales. In the field of tests the criteria of objectivity, reliability, and validity have been widely applied. The position of the author is that these same criteria should be applied to the data-gathering devices in supervision. Then follows a review of several studies which bear on the reliability and validity of several devices. Many of the devices are found to have low reliability and little or unknown validity. Let us turn now to the applicability of the three criteria of objectivity, reliability, and validity to the data-gathering devices in supervision.

For illustrative purposes, let it be assumed that an observer counts the number of questions asked by a teacher in a forty-minute period. It is appropriate to apply the criterion of objectivity. For example, it is reasonable to ask whether two or more observers would agree as to the number of questions which were asked by the teacher. It will be granted that it is objectivity which distinguishes modern supervisory devices from the conventional procedures. The increased objectivity has been secured largely because we seek to describe rather than to evaluate teaching. It is because of their specificity and objectivity that the various devices are helpful in promoting teacher improvement.

Turning to reliability, however, we have difficulty. A test is said to be reliable if it gives the same result today and tomorrow. Since teaching is a non-recurring act, we cannot expect a count of the number of questions asked in one class period to be the same as that in another period. Under some conditions and for some purposes the teacher may ask many questions; in other cases, few. The criterion of reliability is not applicable. It would be better to speak of the accuracy of the count. The fact that a thermometer shows the temperature on one day to be higher than it is on another day does not reflect on the accuracy of the instrument. Similarly, we must not expect that descriptions of two different days of teaching by the same teacher will be identical.

Finally, just what does validity mean when applied to this device of asking questions? In ordinary usage, the validity of a test, for example, is a measure of the extent to which the test measures what it purports to measure. What does a count of questions asked measure? The answer is *the number of questions asked*. It is not a measure of the merit of teaching since the number of questions asked by the teacher has no constant relation to effective teaching. Since we have no teaching activities or elements which by common agreement or by experimental evidence are constantly related to effective teaching, it is preferable at the present time not to attempt to apply the criterion of validity in the sense of the relation of teaching acts to so-called "good" teaching. In some cases the criterion of validity may be applied in a different way. If we attempt to measure pupil attention, we may find that in a given class all pupils appear to be giving perfect attention. The eyes of all the pupils are continuously fixed on their work. Further inquiry shows that the pupils were really not attending to their study at all but merely simulating attention to escape possible punishment. In this case our device of measuring attention was not valid. It did not measure attention but rather fear on the part of pupils. It did not measure what it purports to measure.

The stress which Barr places on the criteria of reliability and validity is defensible only in case one is chiefly concerned with rating the teacher, that is, seeking to determine whether or not the teacher is "good." Certainly the teacher should be rated by methods which are as reliable and as valid as possible. However, the supervisor is concerned not with *rating* but with *helping*. His approach to the teacher is not "How 'good' are you?" but "How can I challenge your thinking and promote your growth and improvement?" In line with the last-named purpose, we need be little concerned with reliability and validity in their usual meanings. We should seek objectivity and accuracy sufficient for our various specific purposes. For example, two observers counted the number of questions asked by a teacher. One of the observers lost count because of the speed with which the questions came. One result was 160 questions; the other, 150. The teacher, on seeing the report of 150, said, "Why, that is terrible. I must do something about it." Without regard to reliability or validity, this device had challenged the teacher's thinking and had perhaps proved its worth. A spoon may be useless as a measuring instrument to a chemist, but it may be perfectly adequate in the kitchen. An activity analysis may be of almost negligible value in rating a teacher while it may be of vital significance in helping the teacher to improve.

It should, of course, be mentioned that Barr proposes the development of "standard indices" of good teaching, preferably determined by experimentation. Even a most sanguine outlook with regard to educational science and its immediate future could hardly justify the setting-up of such standards. The relative amounts of pupil and teacher activity, for example, cannot be taken as an index, since to some people pupil activity is indispensable and to others it is an anathema. Even if there were hundreds of experiments available proving the superiority of teacher domination in fact-learning, the adherents of the pupil-activity type of teaching would not admit defeat. They would continue to talk about "concomitants." Standards under these conditions would not only be unscientific, but they would meet strenuous objection on the part of those supervisors and teachers who believe in democratic supervision and who hold that teacher growth will be greatest under the motivation of "felt needs." Such supervisors would decry the substitution of the authority of an uncertain mixture of science and empiricism for the authority of supervisory officers. In either case "democracy" vanishes.

The attempt to apply inappropriate criteria to the devices in supervision will not only be unscientific but will retard the development of helpful supervision. In the field of tests teachers are beginning to disregard the "validity-reliability" bugaboo and are utilizing individual diagnostic tests of many kinds. The result is that tests are becoming valuable teaching tools. Supervisors have developed a rich variety of helpful devices in part because they have been free from the restrictions of "reliability and validity." Let us hope that this freedom may continue. In the last analysis, the important thing about supervision is not that it shall be scientific but rather that it shall be helpful.

These comments with regard to the chapter on validation of data-gathering devices should not be construed as a reflection upon Barr's stimulating work. In fact, this one chapter alone will stimulate enough discussion to justify the writing of the book. Lack of space prevents a discussion of the many interesting problems raised by other chapters of the book. There has been a need for a clarification of the relation between supervision and recent developments in scientific education. This clarification is definitely furthered by the present volume. No supervisor or student of supervision should fail to read it.

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*Another investigation of the relation of high-school and college marks.*—The unique contribution of the study under review<sup>1</sup> concerns the relations found between high-school marks and college marks when high-school marks from different schools are equated by dividing the interval between the passing percentage and 100 per cent into 20 equal intervals. The resulting correlations (around .60 for separate high-school and college subjects and .70 when average scholarship is used) are higher than those usually found when high-school marks are uncorrected.

The monograph is in the orthodox style which has become standard in dissertations of this type. Successive chapters deal with the need for the study, a statement of the problem, the method proposed for its solution, the source and treatment of the data, and a presentation of the results in terms of coefficients of correlation. The procedure was applied to three institutions: Johns Hopkins University, Gettysburg College, and Vanderbilt University. Among the findings are the following: An average of high-school subjects gives a better prediction of college marks than any subject taken separately. One academic subject seems to predict college success as well as another, whereas there is a distinctly lower relation when non-academic subjects are used. A record of four years of high-school scholastic achievement is superior for predictive purposes than records from shorter intervals. The regression equation gives higher multiple correlations than simple averages but not enough higher to be of practical value. Academic subjects are as indicative of success as technical subjects in the school of engineering.

Except for the higher correlations, which are a result of the treatment of the data, there is no finding in the study which has not already been disclosed by previous investigations or which is not easily inferred from them. To the reviewer there seems little excuse for a study of this kind except for the training given the individual who undertakes it. Most of the facts elicited have been revealed many times over in studies which have been made at numerous universi-

<sup>1</sup> Lena James Hawks, *Certain Relationships between Scholarship in High School and in College*. Johns Hopkins University Studies in Education, No. 15. Baltimore: Johns Hopkins Press, 1931. Pp. viii+58. \$1.15.

ties, and the authorities at Johns Hopkins could have persuaded themselves of the essential facts much more easily than by setting one of their graduate students to work on the problem. Too many unsolved and pressing issues face education today to have time wasted in the repetition of problems the answers to which not only have been found but verified scores of times. The blame for this cannot fall on the author, for the work has been carried through in a scholarly way with precision and insight and the report is clearly organized. If graduate students in American schools of education fail to undertake vital and significant problems, the fault must lie with those who guide them.

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*Comprehensive textbooks in second-year French and Spanish.*—In times gone by, methods of teaching in the general field of language seemed to have set into a state of nearly complete gelation. The obfuscation of many language teachers on points of method was thorough and wilful. Probably no other teaching group excelled the pedagogues of linguistics in maintaining that an imposing array of content information would guarantee successful teaching. This bizarre notion exerted its full effect on the writing of textbooks, which were frequently models of arid accuracy. Naturally the study of language fell off and suffered so woefully that not even the mystic doctrine of formal discipline conjured from the murky realms of pseudo-psychology could be of much avail. The pressure occasioned by new and theoretically more practical subjects was partly to blame for the partial decline in interest in foreign-language study, but some of the difficulty surely lay in the teaching and textbooks in these subjects.

Happily, a material change seems to have occurred, and some of the most enlightened investigations in scientific teaching have been in the field of modern foreign language. These investigations have most naturally resulted in some changes in the theory and the writing of books in language. This review offers a few comments on two such language textbooks, one in French and one in Spanish.

The need of a complete and integrated presentation of second-year French has long been recognized. Ina Bartells Smith has given us a volume<sup>1</sup> which should be acceptable to every teacher of French. It is a continuation of the first-year textbook of the Language, Literature, and Life series and contains within its covers all the reading, grammar, verb study, idiom drill, and composition necessary for the entire year. The field of language-teaching has been, on the whole, rather notorious for mediocre teaching technique. Of late, however, many books have appeared dealing with the science and methodology of foreign-language-teaching, for example, the reports of the Modern Foreign Language Study and similar investigations. It seems that Miss Smith's text-

<sup>1</sup> Ina Bartells Smith, *French Book Two*. Chicago: Scott, Foresman & Co., 1931. Pp. xxvi+534. \$2.08.



book has appeared rather opportunely, as she puts into practice many of the theories and suggestions found in these recent books.

The teaching of living modern foreign languages in a vital and cogent fashion presents certain considerable problems in motivation. The excellent format of this book and the wealth of photographs and vivid illustrative material go far toward partially solving these problems.

Miss Smith has divided her presentation into 150 daily assignments, 78 of which are grammar lessons. Elementary grammar is reviewed in the first ten lessons, and the Introduction includes some valuable helps in pronunciation, phonetics, noun genders, and meanings of adjective and noun position. Eleven review lessons are given, and twenty cultural essays are inserted at intervals throughout the book. Some teachers, especially those interested in a consistently direct method, have suggested that the cultural essays might well have been in French.

The grammar lessons consist of very short reading assignments, grammatical explanations and examples, and some exercises. The explanations are clear and concise, and the use of tables and outline forms in presenting verbs and grammar seems effective if properly supplemented by the teacher. Although the book definitely stresses reading ability as the primary skill to be attained, the inclusion of more written exercises might have been beneficial. This omission, however, provides opportunity for the individual teacher to use supplementary work of a locally adapted nature.

The reading lessons include portions of novels, essays, and poems with appropriate questions and exercises. Throughout the entire volume stress is laid on idiomatic expressions, although the author points out that these are confined to the idioms most often encountered. Three full-length novels—*Sans famille*, *L'Abbé Constantin*, and *Vingt ans après*—are included in the book as well as numerous excerpts from the works of famous authors. Footnotes given at the bottom of each page facilitate reference work. The vocabularies are both French-English and English-French and are adequate.

Perhaps the most unique feature of this textbook lies in the cultural essays. These present in an engaging manner not only the customs and conditions of France but also those of the French colonies and settlements. The modern trend in language-teaching is definitely toward the portrayal of the cultural and social aspects of the foreign country in addition to formal grammatical knowledge in the hope that in this way sympathy and understanding may be developed. It is often difficult, especially in small schools with meager libraries, to find material suitable for this purpose, and consequently these essays should prove valuable in accomplishing with surety what the best teachers are doing anyway but frequently with somewhat more effort.

Miss Smith is to be commended for her real and valuable contribution to the teaching of French. The advantages inherent in this book are many and obvious, chief among them being, perhaps, the economy in time and money which a single comprehensive textbook makes possible. The arrangement and

material impart a flexibility which is too often lacking in subjects the content of which is as fixed as is that of French. In addition to these practical values, the book embodies a majority of the recent principles and practices in the field and is a not inconsiderable improvement over the average textbook now in use.

The second-year Spanish textbook of Friedman, Arjona, and Carvajal<sup>1</sup> will undoubtedly find acceptance among teachers of Spanish. It combines in one volume all the grammar, composition, reading, and exercises which the teacher often formerly had to discover here and there in numerous small and partially complete textbooks. The obvious advantages, as pointed out by the authors, lie in the economy of time and money which the single textbook makes possible and in the integration of material, with its attendant gradation, which such an arrangement achieves.

The book is similar in style to others in the same series. There are 150 lessons, the first few of which review briefly the work of the first year. Grammar is presented in sixty-seven lessons, each of which contains a short paragraph designed as a basis for conversation and dictation, a discussion of some phase of grammar, and a number of exercises.

These lessons also afford opportunity for composition. The use of tables and diagrams is commendable and should go far toward simplifying grammar. Although the authors have conformed to the modern technique of foreign-language-teaching in their presentation of much of the material, it is unfortunate that many of the objectionable and formal features of the teaching of grammar have been retained. It devolves upon the individual teacher to vitalize grammar and convince the pupils that it has a functional value. It may well be that a textbook cannot present grammar with other than a structural emphasis.

The reading lessons include a happy selection of Spanish classics. *Fortuna*, *Zaragüeta*, and *El capitán Veneno* are presented in full with appropriate exercises to be used as daily lessons. Another novel, *La navidad en las montañas*, is also given, and it is suggested that it be used as supplementary reading material. In addition to these lessons, the book contains eighteen essays dealing with the life and culture of Spain and Spanish America. These essays are valuable in content but might well have been presented in Spanish rather than in English for second-year pupils.

The book contains a guide to pronunciation and punctuation as well as complete Spanish-English and English-Spanish vocabularies. By no means the least of the attractive features of this volume are the many illustrations of Spanish life, art, and literature.

All in all, the authors have produced a textbook which is a decided improvement over any previously used in the field. It is comprehensive, yet not unwieldy. It possesses a flexibility which should be of value for use in classes where modern teaching devices are employed.

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<sup>1</sup> Rose Lovenhart Friedman, Doris King Arjona, and Esther Pérez Carvajal, *Spanish Book Two*. Chicago: Scott, Foresman & Co., 1931. Pp. xxxii+544. \$2.08.

*Contributions to the literature of physical education.*—Physical education has grown and changed rapidly since the early days of its "muscle-building" stages. The playground, recreation, athletics, health education, and camping movements have rapidly developed and have now become a part of the newer physical education. These developments have greatly enlarged its scope and importance to the lives of people. With this newer concept of physical education, there is need for material dealing with its interpretations and relations to other phases of education.

Two excellent volumes<sup>1</sup> have been published dealing with administrative policies and procedures in health and physical education in the elementary and secondary schools. The first deals with the administrative policies and procedures in elementary schools and the second with administrative policies and procedures in secondary schools. These books set forth in concise form the facts, guides, and standards by which school administrators may determine policies and practices for health and physical education. The authors point out that progress in health and physical education depends more on the administrators than on the experts. The material is presented in question-and-answer form and deals with programs, athletics, facilities, equipment, construction, and supervision. The questions are clearly stated and are answered with scientific facts whenever these are available; in other cases the best opinion on the question is presented.

In the newer concept of physical education more concern is being given to man as he works and plays in life and to the right use of his leisure time. Mind and body relationships are being scientifically studied, and social and character development are receiving attention. A series of interpretations of physical education<sup>2</sup> contributes greatly to a clearer presentation and understanding of these goals. Volume I of this series deals with mind and body relationships and shows the impossibility of the separation of physical and mental activities. This volume also gives the physiological basis for standards in health and physical education and will assist the reader in analyzing and understanding the present-day developments in the field. It indicates the relation of physical-education activities to other phases of education and to the curriculum as a whole. These relations, with considerable scientific background, are interestingly presented in chapters dealing with "Life as a Bio-physical Mechanism," "Living as a Bio-chemical Mechanism," "Health as an Integration of the Living Organism," "Character," "Leisure-Time Arts as an Expression of the Fullness of Life," "Physical and Health Education as a Profession," and "Administration of Health and Physical Education."

<sup>1</sup> Jesse Feiring Williams and Clifford Lee Brownell, *Health and Physical Education or Public School Administrators: Elementary Schools*, pp. x+118; *Secondary Schools*, pp. xiv+168. New York: Teachers College, Columbia University.

<sup>2</sup> *Interpretations of Physical Education: Vol. I, Mind-Body Relationships*, pp. viii+276, \$2.00; *Vol. II, Nature and Scope of Examinations*, pp. viii+308, \$2.00. Edited by Jay B. Nash. New York: A. S. Barnes & Co., Inc., 1931.

Volume II deals with the nature and scope of examinations. It presents the various types of tests, examinations, and procedures which are used to determine as scientifically as possible the condition of the individual, and it tells, upon the basis of this information, how best to provide for his educational guidance. Physical examinations in the past have been too narrow. They have been conducted only in terms of defects. We need as well to know the capacities of an individual. Any sound program of health and physical education should be based on an analysis of the capacities as well as the needs of an individual. This volume presents many new ideas for considering these problems and is highly recommended to leaders and teachers in the field of health and physical education.

A study dealing with the use of apparatus<sup>1</sup> should be called to the attention of physical-education teachers. Part I of this study is especially interesting and valuable because it traces the history of physical education in this country and shows the influence of other countries on our physical education. Part II contains a series of experiments in the use of apparatus and a report of the results obtained. Some of the conclusions lack sufficient supporting data, but, on the whole, the book presents a well-rounded program of activities and tests in the use of apparatus.

L. B. SHARP

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*Pupil readings for guidance.*—Increasing recognition and understanding of the guidance function is expressed in the output of new and varied readings of a textual character for pupils of junior high school age. Of three recent publications in this field<sup>2</sup> *Occupations through Problems* follows most nearly the usual pattern that has characterized textbooks for the course in occupations. Brief consideration is given to the problems of choosing an occupation, preparing for it, and securing employment, and three-quarters of the book is devoted to a survey of occupations as classified by the United States Bureau of the Census. In the judgment of the reviewer, this volume does not represent any step in advance over preceding books in the field. It covers a great deal of ground and in too condensed a manner to convey reality. The "problems" do not contribute any more than do the problems which other textbook-writers have listed in their

<sup>1</sup> Leopold F. Zwarg, *A Study of the History, Uses and Values of Apparatus in Physical Education*. Philadelphia: Temple University, 1930. Pp. 140.

<sup>2</sup> a) James B. Edmonson and Arthur Dondineau, *Occupations through Problems*. New York: Macmillan Co., 1931. Pp. x+214. \$0.80.

b) Clyde M. Hill and Raymond D. Mosher, *Making the Most of High School: A Textbook in Educational Guidance for Junior-High-School Pupils*. Chicago: Laidlaw Bros., 1931. Pp. 288. \$0.96.

c) Harry Dexter Kitson, *I Find My Vocation*. New York: McGraw-Hill Book Co., Inc., 1931. Pp. xvi+216. \$1.40.

works but have not mentioned in their titles. The supplementary readings listed at the chapter ends are confined to five books, two of which are excellent volumes of vocational readings prepared by scholarly authors to accompany their own scholarly textbooks.

*Making the Most of High School* is a book for pupils of the seventh or eighth grade and is designed to orient them with reference to the opportunities of high-school education. Nearly two-thirds of the book is given to eleven chapters which describe the values, nature of content, learning activities, and relations to life of the various subject fields. In general, the descriptions seem calculated to create vivid impressions in the minds of pupils of junior high school age. The statements represent a modern philosophy of subject values. The reviewer would have liked to see the brief introductory chapters on the work life and the play life accompanied by similar chapters on the health life and the civic life, concretely revealing the manifold opportunities for intelligent living in these important particulars and suggesting what they require of the individual in understandings, habits, and ideals. If the authors had first shown the pupil a better balanced view of what life is, they would have found it easier to make clear the significance of the subject fields. Despite this criticism, teachers and principals will welcome this book as a valuable addition to guidance literature. It will doubtless find widest acceptance in connection with guidance classes or guidance activity in home-room groups.

The course in "occupations" or "vocational civics" has been commonly justified because of its possibilities for social development and because of its contribution to the following guidance purposes: (1) giving the pupil an analytical understanding of the occupational opportunities of the world; (2) helping him to understand his own abilities, interests, and limitations; and (3) inducing him to see vocational choosing as a task of matching himself with an occupation. *I Find My Vocation* bears to a degree on all these guidance purposes but with a different emphasis from that which is usual. It does not give the description of occupations which is the main characteristic of most textbooks for this course. It does to a degree direct the pupil in his study of occupations, as may be deduced from the following chapter titles: "Looking Over the Vocations," "How To Study an Occupation," "Finding Information in Books and Magazines," "Studying the Biographies of Successful Workers," and "Obtaining Information from Successful People." Mainly, this volume is devoted to the psychology of vocational selection, preparation, progress, and adjustment. A needed service has been rendered by Professor Kitson in amplifying these guidance concepts in language well calculated to be understood and enjoyed by junior high school pupils. The book will find its place either as a basal textbook supplemented by readings in vocations or as fundamental collateral reading for classes using textbooks of the more common type.

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## CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY  
AND PRACTICE

- ANDERSON, C. J., and SIMPSON, I. JEWELL. *The Supervision of Rural Schools*. New York: D. Appleton & Co., 1932. Pp. xiv+468. \$2.50.
- BARTHELMESS, HARRIET MAY. *The Validity of Intelligence Test Elements*. Teachers College Contributions to Education, No. 505. New York: Teachers College, Columbia University, 1931. Pp. viii+92. \$1.50.
- COLEMAN, J. H. *Written Composition Interests of Junior and Senior High School Pupils*. Teachers College Contributions to Education, No. 494. New York: Teachers College, Columbia University, 1931. Pp. viii+118. \$1.50.
- Conference on Examinations* (Held May 23-25, 1931, at Eastbourne, England, under the Auspices of the Carnegie Corporation, the Carnegie Foundation, and the International Institute of Teachers College, Columbia University). Edited by Paul Monroe. New York: Teachers College, Columbia University, 1931. Pp. 316.
- DIX, LESTER. *The Economic Basis for the Teacher's Wage*. Lincoln School Research Studies. New York: Lincoln School of Teachers College, Columbia University, 1931. Pp. xiv+114. \$1.75.
- DOUGLASS, HARL R. *Organization and Administration of Secondary Schools*. Boston: Ginn & Co., 1932. Pp. xiv+580. \$2.60.
- DRAKE, CHARLES ARTHUR. *A Study of an Interest Test and an Affectivity Test in Forecasting Freshman Success in College*. Teachers College Contributions to Education, No. 504. New York: Teachers College, Columbia University, 1931. Pp. vi+60. \$1.50.
- ESSEX, DON L. *Bonding versus Pay-As-You-Go in the Financing of School Buildings*. Teachers College Contributions to Education, No. 496. New York: Teachers College, Columbia University, 1931. Pp. xii+102. \$1.50.
- FANCLER, DELLA GOODE, and CRAWFORD, CLAUDE C. *Teaching the Social Studies*. Los Angeles, California: C. C. Crawford (University of Southern California), 1932. Pp. 376.
- HYDE, MELVIN W. *Standards for Publicity Programs in State-supported Colleges and Universities*: Derived from the Institution's Responsibility for Reporting to Its Constituents. Teachers College Contributions to Education, No. 506. New York: Teachers College, Columbia University, 1931. Pp. viii+80. \$1.50.
- MILLER, HARRY GRAVES, and CHAFFEE, NEWTON W. *The Auditorium Social Arts*. Boston: D. C. Heath & Co., 1932. Pp. xii+414. \$2.20.
- NELSON, GEORGE E. *The Introductory Biological Sciences in the Traditional Liberal Arts College*. Teachers College Contributions to Education, No. 501. New York: Teachers College, Columbia University, 1931. Pp. viii+136. \$1.50.



- NEUMANN, HENRY. *Lives in the Making: Aims and Ways of Character Education*. New York: D. Appleton & Co., 1932. Pp. xiv+370. \$2.25.
- POPE, RUTH VESTA. *Factors Affecting the Elimination of Women Students from Selected Coeducational Colleges of Liberal Arts*. Teachers College Contributions to Education, No. 485. New York: Teachers College, Columbia University, 1931. Pp. viii+110. \$1.50.
- RAGSDALE, CLARENCE E. *Modern Psychologies and Education*. New York: Macmillan Co., 1932. Pp. xviii+408. \$2.25.
- Some Aspects of the Social Sciences in the Schools*. First Yearbook of the National Council for the Social Studies (Department of Social Studies of the National Education Association). Philadelphia: McKinley Publishing Co., 1931. Pp. 176. \$2.00.
- STEPHENS, J. M. *The Influence of Different Stimuli upon Preceding Bonds: An Examination of the Law of Effect*. Teachers College Contributions to Education, No. 493. New York: Teachers College, Columbia University, 1931. Pp. viii+84. \$1.50.
- VOORHIS, THELMA G. *The Relative Merits of Cursive and Manuscript Writing*. Lincoln School Research Studies. New York: Lincoln School of Teachers College, Columbia University, 1931. Pp. x+58. \$1.50.

#### BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

- COULOMB, CHARLES A. *Illustrated Study Guide for the Grades and Junior High School: Ancient and Medieval History, the European Background*. Philadelphia: McKinley Publishing Co., 1931. Pp. 80. \$0.44.
- HART, WALTER W. *Modern Junior Mathematics: Book One (Grade Seven)*, pp. x+246, \$0.84; *Book Two (Grade Eight)*, pp. viii+264, \$0.88; *Book Three (Grade Nine)*, pp. viii+344, \$1.28; *Teacher's Manual (Book One—Grade Seven)*, pp. 38, \$0.20; *Teacher's Manual (Book Two—Grade Eight)*, pp. 32, \$0.20. Boston: D. C. Heath & Co., 1931.
- HESSLER, JOHN C. *The First Year of Chemistry*. Chicago: Benj. H. Sanborn & Co., 1931. Pp. xii+580.
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